

RANDOX

# THIRD PARTY CONTROLS



ACUSERA

# RANDOX

QUALITY CONTROL

## ACUSERA

TRUE THIRD PARTY CONTROLS  
OFFERING COMPLETE TEST MENU CONSOLIDATION



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# BENEFITS

For over 40 years Randox has been shaping the future of clinical diagnostics with our pioneering high quality, cost effective laboratory solutions. With approximately 70% of clinical decisions based on laboratory test results, it is essential that the results provided are accurate and reliable in order to prevent potential misdiagnosis or inappropriate treatment.

Quality Control is our passion; we believe in producing high quality material that can help streamline procedures, whilst saving time and money for laboratories of all sizes and budgets. With an extensive product offering comprising third party quality controls & calibrators, interlaboratory data management, external quality assessment, calibration verification and molecular IQC and EQA for infectious disease testing, you can count on Randox to deliver trustworthy results time and time again. Just ask one of our 60,000 users worldwide.



### Commutability

All Acusera controls are designed to react to the test system in the same manner as the patient sample, helping to meet ISO 15189:2012 requirements whilst reducing inconvenient and costly shifts in QC results when reagent batch is changed.



### Accurate Target Values

Our unique value assignment process utilises thousands of independent labs globally, ensuring availability of highly accurate, robust target values for a wide range of instruments and methods, ultimately eliminating the need to spend time and money assigning in-house.



### True Third Party Controls

Manufactured independently, the Acusera range delivers unbiased performance assessment with any instrument or method, helping to meet ISO 15189:2012 requirements whilst simultaneously eliminating the need for multiple instrument dedicated controls.



### Shelf Life

With a shelf life of up to four years for lyophilised controls and two years for liquid controls, you can benefit from continuity of lot supply whilst reducing the frequency of new lot validation studies, thus saving time and money.



### Consistency

Our superior manufacturing processes ensure stability claims and analyte levels won't differ significantly from lot-to-lot. You can therefore be sure of receiving the same standard of product time and time again.



### Traceability

The values assigned to both our calibrators and control materials are traceable to a recognised reference material or reference measurement procedure meeting ISO 17511 and ISO 18153 requirements.



### Consolidation

Specialising in consolidation, the Acusera range of multi-analyte controls is designed to reduce the number of individual controls required to cover your test menu, ultimately reducing costs, preparation time and storage space.



### Clinically Relevant Levels

The presence of analytes at key decision levels not only helps to ensure accurate instrument performance but maximises laboratory efficiency by eliminating the need for additional low/high level controls at extra expense.



### Reduced Waste

The unrivalled working stability of the Acusera control range helps to keep waste and costs to a minimum.



### Flexible Options

With an extensive range of assayed/unassayed, liquid/lyophilised and single/multi-analyte controls, the Acusera portfolio has a solution to suit all laboratory preferences.



### Custom Controls

Randox is a market leader in the manufacture of customised quality controls designed to meet the individual and unique requirements of even the most specialised laboratories.

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For more information about Randox and for our full range of products,  
please visit [randox.com](https://www.randox.com), or contact your local Randox representative.  
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# ISO REQUIREMENTS

Acusera; helping you to meet ISO 15189:2012 requirements.

## Third Party Controls

**“Use of independent third party control materials should be considered, either instead of, or in addition to, any control materials supplied by the reagent or instrument manufacturer”**

As true third party controls, the Acusera range has been designed to provide an unbiased, independent assessment of performance. Our Acusera controls have not been manufactured in line with, or optimised for use with any particular reagent, method or instrument.

## Commutability

**“The laboratory shall use quality control materials that react to the examining system in a manner as close as possible to patient samples”**

Many Acusera controls are 100% commutable, ensuring they behave in the same manner as a patient sample thus providing an accurate reflection of test system performance.

## Clinically Relevant Levels

**“The laboratory should choose concentrations of control materials wherever possible, especially at or near clinical decision values, which ensure the validity of decisions made”.**

The inclusion of analytes at clinical decision levels will not only eliminate the need to purchase additional low/high level controls but will help to ensure accurate instrument performance.

## Data Management

**“The laboratory shall have a procedure to prevent the release of patient results in the event of quality control failure. When the quality control rules are violated and indicate that examination results are likely to contain clinically significant errors, the results shall be rejected.... Quality Control data shall be reviewed at regular intervals to detect trends in examination performance”.**

Acusera 24•7 provides instant access to an unrivalled range of features including QC multi-rules, interactive charts, live peer group data, automatic calculation of Measurement Uncertainty & Sigma Metrics & our unique dashboard interface, all designed to speed up the review process and provide at-a-glance performance assessment.

## EQA

**“The laboratory shall participate in interlaboratory comparisons such as those organised by external quality assessment or proficiency testing schemes”.**

The Randox International Quality Assessment Scheme (RIQAS), is used by more than 55,000 laboratory participants in 134 countries and accredited to ISO 17043. As a result, we have RIQAS users on every continent who are registered for one or more of our 39 flexible EQA programmes, utilising the available data to ensure the quality and reliability of their results.

## Consolidate and Save with Randox Acusera.

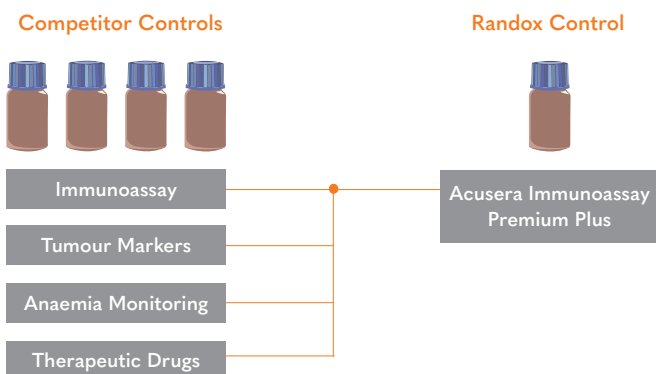
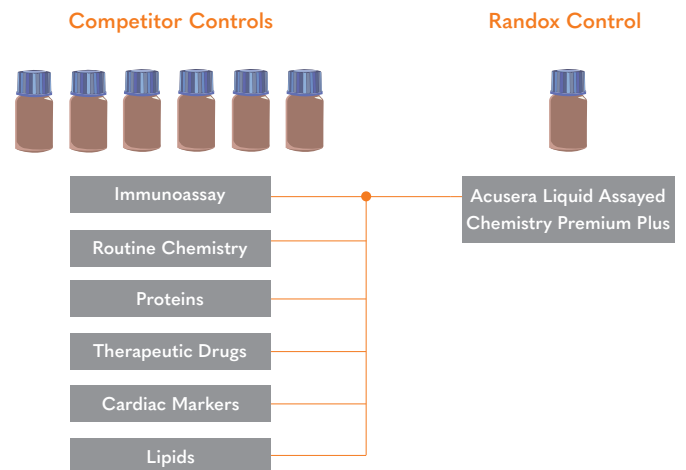
Randox is a leading provider of multi-analyte, true third party controls covering more than 400 parameters. The unique combination of analytes facilitates effective consolidation, helping your laboratory to reduce costs without compromising on performance or quality. Unlike some competitor products, our Acusera Controls are manufactured with analytes present at clinically relevant decision levels, eliminating the need to purchase additional high or low level controls, at extra expense.

### How can consolidating with Randox Acusera benefit you?

With Randox Acusera you could consolidate up to 6 competitor controls into one Acusera control, reducing the amount of storage space required for your QC material, as well as saving valuable time and money for your laboratory. The following examples have been selected to highlight areas where Acusera can help you effectively consolidate your control purchases.

#### Liquid Assayed Chemistry Premium Plus Control

Uniquely combining up to 99 analytes including; routine chemistry, immunoassays, lipids, therapeutic drugs, proteins and cardiac markers in a single vial, you can experience effective consolidation and significant cost savings. The presence of CRP and other proteins at elevated levels will not only help to ensure accurate instrument performance at key decision levels but further reduce the number of individual controls required. - turn to page 21 for more information



#### Immunoassay Premium Plus Control

Impressively covering 55 analytes including tumour markers, therapeutic drugs and routine immunoassay tests, the Acusera Immunoassay Premium Plus control has been uniquely designed to eliminate the need for four or more controls, dramatically reducing costs and time. The added advantage of ultra-low levels of Ferritin, Vitamin B<sub>12</sub> and TSH will help to ensure accurate performance at key decision levels and further reduce the number of controls required. - turn to page 38 for more information

# COMMITMENT TO QUALITY

Radox is committed to quality at every stage of the production process from research and development to customer support. This commitment has been recognised through official accreditation to both national and international standards including UKAS and ISO.

Accreditation to international standards ensures confidence in the quality and consistency of the products and services provided by Radox, and demonstrates compliance to internationally agreed standards.



UKAS

The United Kingdom Accreditation Service (UKAS) is the only national accreditation body recognised by the government to assess against internationally agreed standards.

RIQAS systems and procedures have been accredited with UKAS approval to **ISO/IEC 17043:2010** "Conformity assessment - General requirements for proficiency testing".



ISO13485:2016

The International Organisation for Standardisation (ISO) is the largest developer and publisher of international standards in the world. In 2016, Radox was accredited with **ISO13485:2016** approval.

**ISO13485:2016** relates to the design/development, manufacture, service and distribution of in vitro diagnostic medical devices, in vitro diagnostic test kits, in vitro diagnostic reagents and in vitro diagnostic analysers.

**ISO13485:2016** highlights the requirements for a quality management system where an organisation needs to prove its ability to provide medical devices and other related services that consistently meet regulatory requirements.

FDA Cleared

Many of our quality controls and calibrators are FDA cleared and therefore appropriate for clinical use in the USA. In order for an IVD to be approved for sale in the USA it must not only be safe for use and effective but it must also satisfy the requirements set out in **part 820 title 21** of the Code of Federal Regulations published by the FDA.



CE Mark

Many of our Quality Control (QC) products are CE certified and carry the CE mark. CE marking on a product indicates that the product complies with and has satisfied the essential requirements set out by the **In Vitro Diagnostic (IVD) Medical Devices Directive 98/79/EC**. It also demonstrates the fact the product is fit for its intended purpose.

The CE mark is also a declaration from the manufacturer that the product has met all legislation in relation to health and safety and where required, has been assessed in accordance with this legislation.

CE marking is essential for products to be placed on the market and sold in the European Union (EU). It also ensures the free movement of products within the EFTA and EU.

Canadian Medical Device Regulations from Health Canada

Many Radox products, including our quality controls and calibrators, are **licensed for use in Canada**. Before an IVD device can be sold in Canada, it must meet the requirements set out in the Therapeutic Products Directorate. Health Canada reviews all medical devices to assess their safety, effectiveness and quality before they are authorised for sale.



# ANTIOXIDANT CONTROLS

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Free radicals are highly reactive molecules that seek stability by gaining other electrons. In their attempt to do this they often attack nearby molecules, resulting in cellular or systemic damage. Antioxidants act by preventing or slowing the damage caused by these free radicals. A reduction in total antioxidant status has been identified in several disease states, such as cancer and heart disease. Our Acusera Antioxidant Quality Controls are lyophilised for enhanced stability and cover a range of antioxidants ideal for both clinical and research use.

# ANTIOXIDANTS

## Antioxidant Product Range

Product Description	Size	Cat. No.	Page No.
Glutathione Peroxidase (Ransel) Control	10 x 1 ml	SC692	08
Glutathione Peroxidase (Ransel) Calibrator	10 x 1 ml	SC10154	08
Glutathione Reductase Control	10 x 5 ml	GR2608	08
Glutathione Reductase Calibrator	10 x 5 ml	GR2609	08
Superoxide Dismutase (Ransod) Control	10 x 1 ml	SD126	08
Total Antioxidant Status (TAS) Control	10 x 5 ml	NX2331	08
Total Antioxidant Status (TAS) Calibrator	10 x 1 ml	NX2332	08



Liquid  
ready-to-use



Liquid  
frozen



Lyophilised for  
enhanced stability



Assayed target  
values provided



100% human  
matrix

## Glutathione Peroxidase (Ransel) Control and Calibrator

A bovine based, whole blood control designed for use in the routine monitoring of accuracy and precision. This product is compatible for use on most clinical chemistry analysers.

- Lyophilised for enhanced stability
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 3 days at 2°C to 8°C
- Single point calibrator

Description	Size	Cat. No.
Ransel Control	10 x 1 ml	SC692
Ransel Calibrator	10 x 1 ml	SC10154

## Glutathione Reductase Control and Calibrator

A bovine based control designed for use in the routine monitoring of accuracy and precision. This product is compatible for use on most clinical chemistry analysers.

- Lyophilised for enhanced stability
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 1 days at 2°C to 8°C or 8 hours at 15°C to 25°C

Description	Size	Cat. No.
Glutathione Reductase Control	10 x 5 ml	GR2608
Glutathione Reductase Calibrator	10 x 5 ml	GR2609

## Superoxide Dismutase (Ransod) Control

A bovine based, whole blood control designed for use in the routine monitoring of accuracy and precision. This product is compatible for use on most clinical chemistry analysers.

- Lyophilised for enhanced stability
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 10 days at 2°C to 8°C

Description	Size	Cat. No.
Ransod Control	10 x 1 ml	SD126

## Total Antioxidant Status (TAS) Control and Calibrator

A human based control designed for use in the routine monitoring of accuracy and precision. This product is compatible for use on most clinical chemistry analysers.

### Control

- Lyophilised for enhanced stability
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 2 days at 2°C to 8°C or 12 hours at 15°C to 25°C

### Calibrator

- Lyophilised for enhanced stability
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 2 days at 2°C to 8°C or 28 days at -20°C
- Single point calibrator

Description	Size	Cat. No.
Total Antioxidant Status Control	10 x 5 ml	NX2331
Total Antioxidant Status Calibrator	10 x 1 ml	NX2332

# BLOOD GAS CONTROLS

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Blood Gas tests can provide crucial information for medical professionals in acute care environments. As such, the results they produce must be accurate and reliable to ensure correct patient diagnosis and subsequent treatment. Used in both clinical laboratories and at the point-of-care, our Acusera Blood Gas Controls have been designed to ensure ease-of-use and peace of mind. The liquid ready-to-use format ensures that no preparation time is needed and controls can be easily stored both on the ward and in the laboratory at 2°C to 8°C.

## Blood Gas Product Range

Product Description	Size	Cat. No.	Page No.
Blood Gas Control Level 1	30 x 1.8 ml	BG5001	11
Blood Gas Control Level 2	30 x 1.8 ml	BG5002	11
Blood Gas Control Level 3	30 x 1.8 ml	BG5003	11



Liquid  
ready-to-use



Liquid  
frozen



Lyophilised for  
enhanced stability



Assayed target  
values provided



100% human  
matrix

# BLOOD GAS

## Blood Gas Control

Analytes				
Bicarbonate	Glucose	pH	Sodium	
Calcium	Lactate	pO <sub>2</sub>		
Chloride	pCO <sub>2</sub>	Potassium		

Combining 10 parameters including electrolytes and lactate, the Acusera Blood Gas control is designed to meet the demands of today's blood gas analysers. Supplied in convenient, easy to open ampoules and in a liquid ready-to-use format, preparation is kept to an absolute minimum, making this control ideally suited for POC testing. As a true third party control, assayed target values are provided, ensuring unbiased performance assessment.

- **Liquid ready-to-use**
- **Aqueous material**
- **Suitable for use in POCT**
- **Stable to expiry date at 2°C to 8°C**
- **Once opened, controls should be analysed immediately for pH and blood gas analytes; for electrolyte measurements, the control should be analysed within 1 hour of opening**

Description	Size	Cat. No.
Blood Gas Control Level 1	30 x 1.8 ml	BG5001
Blood Gas Control Level 2	30 x 1.8 ml	BG5002
Blood Gas Control Level 3	30 x 1.8 ml	BG5003

# CARDIAC CONTROLS

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The accurate diagnosis of a potentially life threatening cardiac event is essential in order to avoid misdiagnosis and/or incorrect treatment. The Acusera Cardiac Controls have been designed to cover a wide range of cardiac markers at clinical decision levels, eliminating the need for additional low level controls at extra expense. Manufactured from 100% human serum, a matrix similar to that of the patient sample is guaranteed.

## Cardiac Product Range

Product Description	Size	Cat. No.	Page No.
Cardiac Control – Ultra Low (Abbott & Roche)	3 x 3 ml	CQ10453	14
Cardiac Control Level 1 (Abbott & Roche)	3 x 3 ml	CQ10454	14
Cardiac Control Level 2 (Abbott & Roche)	3 x 3 ml	CQ10455	14
Cardiac Control Level 3 (Abbott & Roche)	3 x 3 ml	CQ10456	14
Cardiac Control – Ultra Low (Siemens)	3 x 3 ml	CQ10428	14
Cardiac Control Level 1 (Siemens)	3 x 3 ml	CQ10429	14
Cardiac Control Level 2 (Siemens)	3 x 3 ml	CQ10430	14
Cardiac Control Level 3 (Siemens)	3 x 3 ml	CQ10431	14
Tri-Level Cardiac Control	3 x 1 ml	CQ3100	14
Tri-Level Cardiac Control	3 x 2 ml	CQ3259	14
Troponin T Control (ultra low)	6x 3 ml	CQ10450	15
CK-MB Control	10 x 2 ml	CK1212	15
CK-MB Calibrator	10 x 1 ml	CK2393	15



Liquid  
ready-to-use



Liquid  
frozen



Lyophilised for  
enhanced stability



Assayed target  
values provided



100% human  
matrix



## Cardiac Control

Analytes			
<b>Cardiac Ultra Low</b> Troponin I	<b>Cardiac Level 1</b> NT-proBNP Troponin I	<b>Cardiac Level 2</b> NT-proBNP Troponin I	<b>Cardiac Level 3</b> NT-proBNP Troponin I

Delivering an assayed solution for Troponin I and NT-proBNP testing, the Acusera Cardiac Control is designed for use with Abbott, Roche and Siemens systems. This control provides a full range of clinically relevant testing levels, including High Sensitivity Troponin I.

- **Liquid frozen**
- **Human based serum**
- **4 Clinically relevant levels (including Ultra-Low)**
- **Stable to expiry date at -18°C to -24°C**
- **Open vial stability of up to 7 days at 2°C to 8°C**

Description	Size	Cat. No.
Cardiac Control Ultra Low (Abbott & Roche)	3 x 3 ml	CQ10453
Cardiac Control Level 1 (Abbott & Roche)	3 x 3 ml	CQ10454
Cardiac Control Level 2 (Abbott & Roche)	3 x 3 ml	CQ10455
Cardiac Control Level 3 (Abbott & Roche)	3 x 3 ml	CQ10456
Cardiac Control Ultra Low (Siemens)	3 x 3 ml	CQ10428
Cardiac Control Level 1 (Siemens)	3 x 3 ml	CQ10429
Cardiac Control Level 2 (Siemens)	3 x 3 ml	CQ10430
Cardiac Control Level 3 (Siemens)	3 x 3 ml	CQ10431

## Tri-Level Cardiac Control

Analytes			
CK (Total) CK-MB (Activity)*	CK-MB (Mass) Homocysteine	Myoglobin Troponin I	Troponin T

The Acusera Cardiac Control was designed for the routine monitoring of accuracy and precision. Assayed, instrument specific values and ranges are provided for 7 common cardiac markers, eliminating the need to spend time assigning target values in-house. The availability of two convenient pack sizes ensures suitability for all laboratory throughputs.

- **Lyophilised for enhanced stability**
- **Human based serum**
- **Cut off levels for Troponin I and T in-line with international recommendations**
- **Stable to expiry date at 2°C to 8°C**
- **Reconstituted stability of 5 days at 2°C to 8°C or 28 days at -20°C**

Description	Size	Cat. No.
Tri-Level Cardiac Control	3 x 1 ml	CQ3100
Tri-Level Cardiac Control	3 x 2 ml	CQ3259

\* Only available in level 2 and level 3

# CARDIAC

## Troponin T Control

Intended for use with the Roche system, this control is manufactured using only the highest quality material.

- Liquid frozen
- 100% human serum
- Ultra low levels of Troponin T
- Stable to expiry date at -18°C to -24°C
- Open vial stability of up to 7 days at 2°C to 8°C

Description	Size	Cat. No.
Troponin T Control	6 x 3 ml	CQ10450

## CK-MB Control and Calibrator

Analytes	
CK-MB	CK-NAC*

A dedicated true third party CK-MB control designed for the routine monitoring of both accuracy and precision. Assayed target values and ranges are provided for serum start, substrate start and CK-NAC methods eliminating the need to spend time assigning target values in-house.

- Lyophilised for enhanced stability
- 100% human serum
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 5 days at 4°C, 8 hours at 25°C and 28 days at -20°C
- Single point calibrator

Description	Size	Cat. No.
CK-MB Control	10 x 2 ml	CK1212
CK-MB Calibrator	10 x 1 ml	CK2393

\* CK-NAC is not available in the CK-MB Calibrator

# CLINICAL CHEMISTRY CONTROLS

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Our clinical chemistry controls are suitable for a range of integrated analyser systems and methods. To cover all laboratory requirements, our flexible Clinical Chemistry Controls contain up to 100 analytes, delivering effective consolidation and cost savings. Available in a choice of assayed/unassayed, liquid/lyophilised and human/bovine formats, options are available to suit all laboratory sizes and budgets.

# CLINICAL CHEMISTRY

Clinical Chemistry Product Range			
Product Description	Size	Cat. No.	Page No.
Precision Chemistry Premium Plus Level 2	20 x 5 ml	UN1557	18
Precision Chemistry Premium Plus Level 3	20 x 5 ml	UE1558	18
Liquid Chemistry Premium Plus Level 1	12 x 5 ml	LUL5069	19
Liquid Chemistry Premium Plus Level 2	12 x 5 ml	LUN5070	19
Liquid Chemistry Premium Plus Level 3	12 x 5 ml	LUE5071	19
Assayed Chemistry Premium Plus Level 2	20 x 5 ml	HN1530	20
Assayed Chemistry Premium Plus Level 3	20 x 5 ml	HE1532	20
Assayed Chemistry Premium Plus Level 2 & 3	2 x 5 x 5 ml	HS2611	20
Liquid Assayed Chemistry Premium Plus Level 1	12 x 5 ml	LAL4213	21
Liquid Assayed Chemistry Premium Plus Level 2	12 x 5 ml	LAN4214	21
Liquid Assayed Chemistry Premium Plus Level 3	12 x 5 ml	LAE4215	21
Bovine Chemistry Assayed Level 1	20 x 5 ml	AL1027	22
Bovine Chemistry Assayed Level 2	20 x 5 ml	AN1026	22
Bovine Chemistry Assayed Level 3	20 x 5 ml	AE1032	22
Clinical Chemistry Calibration Serum Level 2	20 x 5 ml	CAL2350	23
Clinical Chemistry Calibration Serum Level 3	20 x 5 ml	CAL2351	23
Ammonia Ethanol Control Level 1	6 x 2 ml	EA1366	23
Ammonia Ethanol Control Level 2	6 x 2 ml	EA1367	23
Ammonia Ethanol Control Level 3	6 x 2 ml	EA1368	23
Aldolase Calibrator	3 x 1 ml	AD5000	24
Aldolase Control Level 2	3 x 1 ml	AD5001	24
Aldolase Control Level 3	3 x 1 ml	AD5002	24
Liquid Bilirubin Control Level 1	3 x 3 ml	BR10442	24
Liquid Bilirubin Control Level 2	3 x 3 ml	BR10443	24
Bilirubin Elevated Serum	10 x 3 ml	BE454	24
Glycerol Control	3 x 5 ml	GY1369	25
Multi Calibrator	3 x 2 ml	MC1382	25
Multi Control Level 1	5 x 2 ml	MC1379	25
Multi Control Level 2	5 x 2 ml	MC1380	25
Multi Control Level 3	5 x 2 ml	MC1381	25
Glutamine Control Level 1	5 x 5 ml	GM1376	25
Glutamine Control Level 2	5 x 5 ml	GM1377	25
Glutamine Control Level 3	5 x 5 ml	GM1378	25
Glutamine Calibrator	3 x 5 ml	GM1375	25
Serum Indices Control	4 x 5 ml	SI10448	26



Liquid  
ready-to-use



Liquid  
frozen



Lyophilised for  
enhanced stability



Assayed target  
values provided



100% human  
matrix

## Precision Chemistry Premium Plus Control

Analytes			
<p><b>Cardiac</b></p> <ul style="list-style-type: none"> <li>CK (Total)</li> <li>Myoglobin</li> <li>Troponin I</li> </ul> <p><b>Drugs</b></p> <ul style="list-style-type: none"> <li>Carbamazepine</li> <li>Digoxin</li> <li>Gentamicin</li> <li>Lithium</li> <li>Paracetamol</li> <li>Phenobarbitone</li> <li>Phenytoin</li> <li>Salicylate</li> <li>Theophylline</li> <li>Tobramycin</li> <li>Valproic Acid</li> <li>Vancomycin</li> </ul> <p><b>Immunoassay</b></p> <ul style="list-style-type: none"> <li>α-Fetoprotein (AFP)</li> <li>CEA</li> <li>Cortisol</li> <li>Folate</li> <li>hCG</li> </ul>	<ul style="list-style-type: none"> <li>Prolactin</li> <li>PSA (Total)</li> <li>T3 (Free)</li> <li>T3 (Total)</li> <li>T4 (Free)</li> <li>T4 (Total)</li> <li>TSH</li> <li>Vitamin B<sub>12</sub></li> </ul> <p><b>Lipids</b></p> <ul style="list-style-type: none"> <li>Apolipoprotein A-I</li> <li>Apolipoprotein B</li> <li>Cholesterol (HDL)</li> <li>Cholesterol (Total)</li> <li>NEFA</li> <li>Triglycerides</li> </ul> <p><b>Proteins</b></p> <ul style="list-style-type: none"> <li>α-1-Acid Glycoprotein</li> <li>α-1-Antitrypsin</li> <li>Ceruloplasmin</li> <li>Complement C3</li> <li>Complement C4</li> <li>CRP</li> </ul>	<ul style="list-style-type: none"> <li>Ferritin</li> <li>Haptoglobin</li> <li>Immunoglobulin A (IgA)</li> <li>Immunoglobulin E (IgE)</li> <li>Immunoglobulin G (IgG)</li> <li>Immunoglobulin M (IgM)</li> <li>Prealbumin</li> <li>Protein (Total)</li> <li>Transferrin</li> </ul> <p><b>Routine Chemistry</b></p> <ul style="list-style-type: none"> <li>α-HBDH</li> <li>Acid Phosphatase (Prostatic)</li> <li>Acid Phosphatase (Total)</li> <li>Albumin</li> <li>Alkaline Phosphatase (ALP)</li> <li>ALT (GPT)</li> <li>Amylase</li> <li>Amylase (Pancreatic)</li> <li>AST (GOT)</li> <li>Bicarbonate</li> <li>Bile Acids</li> <li>Bilirubin (Direct)</li> <li>Bilirubin (Total)</li> <li>Calcium</li> </ul>	<ul style="list-style-type: none"> <li>Chloride</li> <li>Cholinesterase</li> <li>Creatinine</li> <li>D-3-Hydroxybutyrate</li> <li>γGT</li> <li>GLDH</li> <li>Glucose</li> <li>Iron</li> <li>Iron (TIBC)</li> <li>Iron (UIBC)</li> <li>Lactate</li> <li>Lactate Dehydrogenase (LDH)</li> <li>LAP</li> <li>Lipase</li> <li>Magnesium</li> <li>Osmolality</li> <li>Phosphate (Inorganic)</li> <li>Potassium</li> <li>Sodium</li> <li>Urea</li> <li>Uric Acid (Urate)</li> </ul> <p><b>Trace Metals</b></p> <ul style="list-style-type: none"> <li>Copper</li> <li>Zinc</li> </ul>

Our Precision Chemistry Premium Plus control conveniently covers 86 analytes; including a wide range of proteins, lipids and immunoassays making it perfect for consolidation. As an unassayed, third party control it is suitable for use with a wide range of clinical chemistry platforms.

- Lyophilised for enhanced stability
- Human based serum
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of up to 7 days at 2°C to 8°C or 28 days at -20°C

Description	Size	Cat. No.
Precision Chemistry Premium Plus Level 2	20 x 5 ml	UN1557
Precision Chemistry Premium Plus Level 3	20 x 5 ml	UE1558

# CLINICAL CHEMISTRY

## Liquid Chemistry Premium Plus Control

Analytes			
<b>Cardiac</b> CK (Total) Myoglobin Troponin T	<b>Immunoassay</b> α-Fetoprotein (AFP) CEA Cortisol DHEA Sulphate Folate FSH Growth Hormone (GH) hCG Luteinising Hormone (LH) Progesterone Prolactin Testosterone T Uptake T3 (Free) T3 (Total) T4 (Free) T4 (Total) TSH Vitamin B <sub>12</sub>	<b>Proteins</b> α-1-Acid Glycoprotein α-1-Antitrypsin β-2-Microglobulin Ceruloplasmin Complement C3 Complement C4 CRP Ferritin Haptoglobin Immunoglobulin A (IgA) Immunoglobulin E (IgE) Immunoglobulin G (IgG) Immunoglobulin M (IgM) Prealbumin Protein (Total) Transferrin	<b>Bile Acids</b> Bilirubin (Direct) Bilirubin (Total) Calcium Chloride Cholinesterase Creatinine D-3-Hydroxybutyrate γGT GLDH Glucose Iron Iron (TIBC) Iron (UIBC) Lactate Lactate Dehydrogenase (LDH) LAP Lipase Magnesium Osmolality Phosphate (Inorganic) Potassium Sodium Urea Uric Acid (Urate)
<b>Drugs</b> Amikacin Caffeine Carbamazepine Digoxin Ethanol Gentamicin Lithium Paracetamol Phenobarbitone Phenytoin Salicylate Theophylline Valproic Acid Vancomycin	<b>Lipids</b> Apolipoprotein A-1 Apolipoprotein B Cholesterol (HDL) Cholesterol (LDL) Cholesterol (Total) Lipoprotein (a) Triglycerides	<b>Routine Chemistry</b> α-HBDH ACE (Angiotensin Converting Enzyme)* Acid Phosphatase (Prostatic) Acid Phosphatase (Total) Albumin Alkaline Phosphatase (ALP) ALT (GPT) Amylase Amylase (Pancreatic) AST (GOT) Bicarbonate	<b>Trace Metals</b> Copper Zinc
<b>Electrophoresis</b> α-1-Globulin α-2-Globulin Albumin β-Globulin γ-Globulin			

Comprising 101 analytes in total, the Acusera Liquid Chemistry Premium Plus control is one of the most comprehensive available. Our vast analyte menu allows complete consolidation, eliminating the need to purchase additional controls at extra expense. As an unassayed, third party control it is ideal for monitoring precision on a wide range of laboratory analysers. Presented in a convenient liquid format for ease-of-use, minimal preparation is required.

- Liquid frozen
- Human based serum
- High levels of CRP and other proteins eliminate the need for separate controls
- Stable to expiry date at -20°C to -70°C
- Open vial stability of up to 7 days at 2°C to 8°C
- Typical values provided for all analytes

Description	Size	Cat. No.
Liquid Chemistry Premium Plus Level 1	12 x 5 ml	LUL5069
Liquid Chemistry Premium Plus Level 2	12 x 5 ml	LUN5070
Liquid Chemistry Premium Plus Level 3	12 x 5 ml	LUE5071

\*No claims are made regarding values or stability.

## Assayed Chemistry Premium Plus Control

Analytes			
<b>Cardiac</b> CK (Total)	<b>Immunoassay</b> Cortisol Folate PSA (Total) T3 (Total) T4 (Free) T4 (Total) TSH Vitamin B <sub>12</sub>	Immunoglobulin M (IgM) Protein (Total) Transferrin	D-3-Hydroxybutyrate γGT GLDH Glucose Iron Iron (TIBC) Lactate Lactate Dehydrogenase (LDH)
<b>Drugs</b> Digoxin Gentamicin Lithium Paracetamol Salicylate Theophylline Tobramycin	<b>Lipids</b> Apolipoprotein A-1 Apolipoprotein B Cholesterol (HDL) Cholesterol (Total) NEFA Triglycerides	<b>Routine Chemistry</b> α-HBDH Acid Phosphatase (Total) Albumin Alkaline Phosphatase (ALP) ALT (GPT) Amylase Amylase (Pancreatic) AST (GOT) Bicarbonate Bile Acids Bilirubin (Direct) Bilirubin (Total) Calcium Chloride Cholinesterase Creatinine	Lipase (Colorimetric) Lipase (Turbidimetric) Magnesium Osmolality Phosphate (Inorganic) Potassium Sodium Urea Uric Acid (Urate)
<b>Electrophoresis</b> α-1-Globulin α-2-Globulin Albumin β-Globulin γ-Globulin	<b>Proteins</b> Immunoglobulin A (IgA) Immunoglobulin G (IgG)		<b>Trace Metals</b> Copper Zinc

One of our most popular controls, the Acusera Assayed Chemistry Premium Plus Control, combines a comprehensive 68 analytes in a single vial for maximum efficiency. As a true third party control, assayed instrument, method and temperature specific target values are provided for an extensive range of clinical chemistry analysers, reducing the need to assign values in-house. Also provided are electrophoresis targets as a % breakdown of total protein.

- Lyophilised for enhanced stability
- Human based serum
- Typical Osmolality values: Level 2 is 300 mOsm/kg, Level 3 is 370 mOsm/kg
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of up to 7 days at 2°C to 8°C or 28 days at -20°C

Description	Size	Cat. No.
Assayed Chemistry Premium Plus Level 2	20 x 5 ml	HN1530
Assayed Chemistry Premium Plus Level 3	20 x 5 ml	HE1532
Assayed Chemistry Premium Plus Level 2 & 3	2 x 5 x 5 ml	HS2611

# CLINICAL CHEMISTRY

## Liquid Assayed Chemistry Premium Plus Control

Analytes			
<p><b>Cardiac</b> CK (Total) Myoglobin Troponin T</p> <p><b>Drugs</b> Amikacin Caffeine Carbamazepine Digoxin Ethanol Gentamicin Lithium Paracetamol Phenobarbitone Phenytoin Salicylate Theophylline Valproic Acid Vancomycin</p> <p><b>Electrophoresis</b> α-1-Globulin α-2-Globulin Albumin β-Globulin γ-Globulin</p>	<p><b>Immunoassay</b> α-Fetoprotein (AFP) CEA Cortisol DHEA Sulphate Folate FSH hCG Luteinising Hormone (LH) Progesterone Prolactin PSA (Total) T Uptake T3 (Free) T3 (Total) T4 (Free) T4 (Total) Testosterone TSH Vitamin B<sub>12</sub></p> <p><b>Lipids</b> Apolipoprotein A-1 Apolipoprotein B Cholesterol (HDL) Cholesterol (LDL) Cholesterol (Total) Lipoprotein (a) Triglycerides</p>	<p><b>Proteins</b> α-1- Acid Glycoprotein α-1-Antitrypsin β-2-Microglobulin Ceruloplasmin Complement C3 Complement C4 CRP Ferritin Haptoglobin Immunoglobulin A (IgA) Immunoglobulin E (IgE) Immunoglobulin G (IgG) Immunoglobulin M (IgM) Prealbumin Protein (Total) Transferrin</p> <p><b>Routine Chemistry</b> α-HBDH ACE (Angiotensin Converting Enzyme)* Acid Phosphatase (Total) Albumin Alkaline Phosphatase (ALP) ALT (GPT) Amylase Amylase (Pancreatic) AST (GOT) Bicarbonate</p>	<p><b>Bile Acids</b> Bilirubin (Direct) Bilirubin (Total) Calcium Chloride Cholinesterase Creatinine D-3-Hydroxybutyrate γGT GLDH Glucose Iron Iron (TIBC) Lactate Lactate Dehydrogenase (LDH) Lipase Magnesium Osmolality Phosphate (Inorganic) Potassium Sodium Urea Uric Acid (Urate)</p> <p><b>Trace Metals</b> Copper Zinc</p>

Uniquely combining up to 99 analytes including; routine chemistry, immunoassays, lipids, therapeutic drugs, proteins and cardiac markers in a single vial, laboratories can experience effective consolidation and significant cost savings. The presence of CRP and other proteins at elevated levels will not only ensure accurate instrument performance at key decision levels but further reduce the number of individual controls required. As a true third party control, assayed target values are provided for most major instruments.

- Liquid frozen
- Human based serum
- Assayed instrument specific target values and ranges
- High levels of CRP and other proteins eliminate the need for multiple controls
- Stable to expiry when stored at -20°C to -70°C
- Open vial stability of up to 7 days at 2°C to 8°C

Description	Size	Cat. No.
Liquid Assayed Chemistry Premium Plus Level 1	12 x 5 ml	LAL4213
Liquid Assayed Chemistry Premium Plus Level 2	12 x 5 ml	LAN4214
Liquid Assayed Chemistry Premium Plus Level 3	12 x 5 ml	LAE4215

\*No claims are made regarding values or stability.



## Bovine Chemistry Assayed Control

Analytes			
<b>Cardiac</b> CK (Total)	<b>Lipids</b> Cholesterol NEFA Triglycerides	<b>Amylase</b> AST (GOT) Bicarbonate Bile Acids Bilirubin (Direct) Bilirubin (Total) Calcium Chloride Creatinine D-3-Hydroxybutyrate	<b>Lactate Dehydrogenase (LDH)</b> Lipase Magnesium Osmolality Phosphate (Inorganic) Potassium Sodium Urea Uric Acid (Urate)
<b>Drugs</b> Lithium	<b>Proteins</b> Protein (Total)		
<b>Immunoassay</b> Cortisol PSA (Total) T3 (Total) T4 (Free) T4 (Total) Vitamin B <sub>12</sub>	<b>Routine Chemistry</b> α-HBDH Acid Phosphatase (Prostatic) Acid Phosphatase (Non-Prostatic) Acid Phosphatase (Total) Albumin Alkaline Phosphatase (ALP) ALT (GPT)	<b>Trace Metals</b> Copper Zinc	

Designed for use in the routine monitoring of accuracy and precision, this comprehensive bovine based, assayed control provides method, instrument and temperature specific values for a unique combination of 46 analytes. Due to its bovine serum matrix and inclusion of common veterinary markers; NEFA, Bile Acids, Lactate and D-3 Hydroxybutyrate, the Acusera Bovine Chemistry Assayed Control delivers a cost effective solution especially suited to veterinary laboratories.

- Lyophilised for enhanced stability
- Bovine based serum
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of up to 7 days at 2°C to 8°C or 28 days at -20°C
- GLDH is stable for 1 day at 2°C to 8°C and TIBC (AL1027 Only) is stable for 4 days at 2°C to 8°C.

Description	Size	Cat. No.
Bovine Chemistry Assayed Level 1	20 x 5 ml	AL1027
Bovine Chemistry Assayed Level 2	20 x 5 ml	AN1026
Bovine Chemistry Assayed Level 3	20 x 5 ml	AE1032

# CLINICAL CHEMISTRY

## Clinical Chemistry Calibration Serum

Analytes			
<b>Cardiac</b> CK (Total)	<b>Routine Chemistry</b> α-HBDH	Bilirubin (Total)	Lipase
<b>Drugs</b> Lithium	Acid Phosphatase (Prostatic)	Calcium	Magnesium
<b>Lipids</b> Cholesterol Triglycerides	Acid Phosphatase (Total)	Chloride	Osmolality
<b>Proteins</b> Protein (Total)	Albumin	Cholinesterase	Phosphate (Inorganic)
	Alkaline Phosphatase (ALP)	Creatinine	Potassium
	ALT (GPT)	D-3-Hydroxybutyrate	Sodium
	Amylase (Pancreatic)	γGT	Urea
	Amylase (Total)	GLDH	Uric Acid (Urate)
	AST (GOT)	Glucose	<b>Trace Metals</b>
	Bicarbonate	Iron	Copper
	Bile Acids	Iron (TIBC)	Zinc
	Bilirubin (Direct)	Lactate	
		Lactate Dehydrogenase (LDH)	

Comprising 41 analytes in a single vial, this multi-analyte, third party calibrator is designed for use with a wide range of clinical chemistry platforms. Assayed, instrument, method and temperature specific values are supplied, ensuring accurate and reliable instrument calibration.

- Lyophilised for enhanced stability
- Human based serum
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of up to 7 days at 2°C to 8°C or 28 days at -20°C
- Multi-point calibration serum

Description	Size	Cat. No.
Clinical Chemistry Calibration Serum Level 2	20 x 5 ml	CAL2350
Clinical Chemistry Calibration Serum Level 3	20 x 5 ml	CAL2351

## Ammonia Ethanol Control

Analytes	
Ammonia	Ethanol

This dedicated Ammonia/Ethanol control comes in a highly convenient, liquid ready-to-use format ensuring no preparation is required. As a true third party control, assayed target values are provided, ensuring unbiased performance assessment while eliminating the need for in-house value assignment.

- Liquid ready-to-use
- Aqueous material
- Stable to expiry date at 2°C to 8°C
- Open vial stability of up to 30 days at 2°C to 8°C

Description	Size	Cat. No.
Ammonia Ethanol Control Level 1	6 x 2 ml	EA1366
Ammonia Ethanol Control Level 2	6 x 2 ml	EA1367
Ammonia Ethanol Control Level 3	6 x 2 ml	EA1368

## Aldolase Control and Calibrator

This dedicated Aldolase control is specifically designed to monitor the accuracy and precision of Aldolase on a wide range of chemistry analysers. Supplied in a lyophilised format for enhanced stability, this control and calibrator set comes in a convenient 1ml vial.

- Lyophilised for enhanced stability
- Human based serum
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of up to 5 days at 2°C to 8°C
- Single point calibrator

Description	Size	Cat. No.
Aldolase Calibrator	3 x 1 ml	AD5000
Aldolase Control Level 2	3 x 1 ml	AD5001
Aldolase Control Level 3	3 x 1 ml	AD5002

## Liquid Bilirubin Control

Analytes	
Bilirubin (Direct)	Bilirubin (Total)

Providing a true third party solution of Bilirubin, this control is designed to deliver an unbiased, independent assessment of performance. Two levels are available covering the required clinically relevant decision levels for neonatal testing and adult liver disease.

- Liquid frozen
- 100% human serum
- Stable to expiry when stored at -20°C to -70°C
- Open vial stability of 7 days at 2°C to 8°C
- Elevated levels of Bilirubin ensure clinical decision levels are met

Description	Size	Cat. No.
Liquid Bilirubin Control Level 1	3 x 3 ml	BR10442
Liquid Bilirubin Control Level 2	3 x 3 ml	BR10443

## Bilirubin Elevated Serum

Analytes	
Bilirubin (Direct)	Bilirubin (Total)

Acusera Bilirubin Elevated Serum is a bovine based serum designed for use in the monitoring of accuracy and precision. This product is suitable for monitoring paediatric bilirubin levels and contains method specific target values and ranges.

- Lyophilised for enhanced stability
- Bovine serum
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 5 days at 2°C to 8°C

Description	Size	Cat. No.
Bilirubin Elevated Serum	10 x 3 ml	BE454

# CLINICAL CHEMISTRY

## Glycerol Control

Dedicated Glycerol control for use in the routine monitoring of accuracy and precision. Supplied in a lyophilised format for enhanced stability, this control comes with assayed target values for most major chemistry analysers.

- Lyophilised for enhanced stability
- Human based serum
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 7 days at 2°C to 8°C

Description	Size	Cat. No.
Glycerol Control	3 x 5 ml	GY1369

## Multi Control and Calibrator

### Analytes

Ammonia

Glucose

Glutamate

Lactate

This multi-analyte control and calibrator is designed for use in the routine monitoring of accuracy and precision. Supplied in a convenient liquid ready-to-use format no preparation is required.

- Liquid ready-to-use
- Human based serum
- Stable to expiry date at 2°C to 8°C
- Once opened stable to expiry date at 2°C to 8°C
- Single point calibrator

Description	Size	Cat. No.
Multi Calibrator	3 x 2 ml	MC1382
Multi Control Level 1	5 x 2 ml	MC1379
Multi Control Level 2	5 x 2 ml	MC1380
Multi Control Level 3	5 x 2 ml	MC1381

\*FOR BIOTECHNOLOGY INDUSTRIAL USE.  
Not for use in diagnostic procedures.

## Glutamine Control and Calibrator

This dedicated Glutamine control is supplied in a lyophilised format for enhanced stability. Manufactured using 100% human material, it is designed to mimic patient samples, ensuring accurate test system performance.

- Lyophilised for enhanced stability
- 100% human material
- Stable to expiry at 2°C to 8°C
- Reconstituted stability of 7 days at 2°C to 8°C
- Single point calibrator

Description	Size	Cat. No.
Glutamine Control Level 1	5 x 5 ml	GM1376
Glutamine Control Level 2	5 x 5 ml	GM1377
Glutamine Control Level 3	5 x 5 ml	GM1378
Glutamine Calibrator	3 x 5 ml	GM1375

\*FOR BIOTECHNOLOGY INDUSTRIAL USE.  
Not for use in diagnostic procedures.

## Serum Indices Control

Analytes		
Haemolysis (H)	Icterus (I)	Lipemia (L)

Designed to be used to monitor an IVD instrument's response in the detection of haemolysed, icteric and lipemic (HIL) samples. This control can be utilised in laboratory interference testing to assist in improving error detection of pre-analytical errors affecting clinical chemistry testing.

- Lyophilised for enhanced stability
- Human based serum
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 14 days at 2°C to 8°C
- 4 separate levels available including a negative (-) and three positives (+, ++ & +++)

Description	Size	Cat. No.
Serum Indices Control	4 x 5 ml	S110448

# COAGULATION AND HAEMATOTOLOGY CONTROLS

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Our true third party Coagulation and Haematology Controls have been designed to deliver an unbiased assessment of analytical performance, while providing a matrix similar to that of the patient. These multi-analyte controls cover the full clinical range in a single control, enabling you to consolidate your test menu, saving both time and money.

# COAGULATION AND HAEMATOTOLOGY

## Coagulation and Haematology Product Range

Product Description	Size	Cat. No.	Page No.
Coagulation Control Level 1	12 x 1 ml	CG5021	29
Coagulation Control Level 2	12 x 1 ml	CG5022	29
Coagulation Control Level 3	12 x 1 ml	CG5023	29
Haematology Control	3 x 2 x 4.5 ml	HM5162	29



Liquid  
ready-to-use



Liquid  
frozen



Lyophilised for  
enhanced stability



Assayed target  
values provided



100% human  
matrix

# COAGULATION AND HAEMATOLOGY

## Coagulation Control

Analytes			
Activated Partial Thromboplastin Time (APTT)	Factor VII	Factor XI	Protein C
Anti-Thrombin III (AT III)	Factor VIII	Factor XII	Protein S
Factor II	Factor IX	Fibrinogen	Prothrombin Time (PT)
Factor V	Factor X	Plasminogen	Thrombin Time (TT)

Our Coagulation Control combines 16 analytes in total, delivering a comprehensive, third party solution for laboratories carrying out both routine and specialised coagulation tests. Comprising a variety of factor assays and basic coagulation tests, the number of individual controls required is reduced, saving costs and time. Assayed method and instrument specific target values & ranges are provided, eliminating the need to spend time assigning target values in-house.

- Lyophilised for enhanced stability
- 100% human material
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of up to 24 hours at 2°C to 8°C

Description	Size	Cat. No.
Coagulation Control Level 1	12 x 1 ml	CG5021
Coagulation Control Level 2	12 x 1 ml	CG5022
Coagulation Control Level 3	12 x 1 ml	CG5023

## Haematology Control

Analytes	
BASO-X	Mean Platelet Volume (MPV)
BASO -Y	Monocytes (MONO)
Basophils (BASO)*	% Monocytes (% MONO)
% Basophils (% BASO)	Neutrophils (NEUT)
DIFF-X	% Neutrophils (% NEUT)
DIFF-Y	Nucleated Red Blood Cells (NRBC)*
Eosinophils (EOS)	Nucleated Red Blood Cells X (NRBC-X)
% Eosinophils (%EOS)	Nucleated Red Blood Cells Y (NRBC-Y)
FSC-X	% Nucleated Red Blood Cells (%NRBC)
Haematocrit (HCT)	Platelet Distribution Width (PDW)
Haemoglobin (HGB)	Platelet Large Cell Ratio (P-LCR)
Haematopoietic Progenitor Cell (HPC)	Plateletcrit (PCT)
IMIDC	Platelets (PLT)
IMIRF	Platelets Optical Count (PLT-O)
Immature Granulocytes (IG)	Red Blood Cells (RBC)
% Immature Granulocytes (%IG)	Red Blood Cell X (RBC-X)
Immature Myeloid Information (IMI)	Red Blood Cell Y (RBC-Y)
Immature Platelet Fraction (IPF)	Red Blood Cell Distribution Width CV (RDW-CV)
Lymphocytes (LYMPH)	Red Blood Cell Distribution Width SD (RDW-SD)
% Lymphocytes (% LYMPH)	Red Blood Cells Optical Count (RBC-O)
Mean Corpuscular Haemoglobin (MCH)	White Blood Cells (WBC)
Mean Corpuscular Haemoglobin Concentration (MCHC)	White Blood Cells Differential (WBC-D)
Mean Corpuscular Volume (MCV)	

The Acusera Haematology Control combines an impressive 45 analytes, covering the full blood profile in a convenient liquid ready-to-use format, ultimately increasing productivity and reducing the need for multiple controls. Providing a true third party solution for 5-part WBC differential Sysmex Haematology and Mindray analysers, ensuring unbiased performance assessment.

- Liquid ready-to-use
- 100% Human whole blood
- Barcoded labels enabling quick and easy sample recognition
- Stable for 70 days at 2°C to 8°C
- Open vial stability of 14 days at 2°C to 8°C

Description	Size	Cat. No.
Haematology Control Tri-Level	3 x 2 x 4.5 ml	HM5162

\*This product may not be suitable for the control of Basophils and NRBC on some Sysmex models.



# DIABETES AND WHOLE BLOOD CONTROLS

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This Acusera Diabetes range provides a true third party solution for key tests used in the diagnosis and monitoring of diabetes and haemoglobin variants. Designed for use on multiple platforms, an independent assessment of performance is guaranteed. An extended reconstituted stability of four weeks for many controls will not only keep waste to a minimum but will help to reduce costs. As with all Acusera controls, laboratories can expect to experience reduced preparation time and costs without compromising on consistency or quality.

# DIABETES AND WHOLE BLOOD

## Diabetes and Whole Blood Product Range

Product Description	Size	Cat. No.	Page No.
HbA1c Control Set Level 1 and 2	2 x 2 x 0.5 ml	HA5072	32
HbA1c Calibrator Series	5 x 2 ml, 1 x 8 ml	HA3444	32
Liquid HbA1c Control Level 1	6 x 1 ml	HA10224	32
Liquid HbA1c Control Level 2	6 x 1 ml	HA10225	32
Liquid HbA1c Control Set	2 x 2 x 0.5 ml	HA10155	32
G-6PDH Control Deficient	6 x 0.5 ml	PD2617	32
G-6PDH Control Normal	6 x 0.5 ml	PD2618	32
Fructosamine Control Level 1	3 x 1 ml	FR2994	33
Fructosamine Control Level 3	3 x 1 ml	FR2996	33
Fructosamine Calibrator	3 x 1 ml	FR2993	33



Liquid  
ready-to-use



Liquid  
frozen



Lyophilised for  
enhanced stability



Assayed target  
values provided



100% human  
matrix

# DIABETES AND WHOLE BLOOD

## HbA1c Control and Calibrator Series

The Acusera HbA1c control is designed for use in the quality control of HbA1c assays. Assayed instrument and method specific target values and ranges are provided for all major systems and methods including HPLC. A reconstituted stability of 4 weeks keeps waste to a minimum and helps to reduce costs.

### Control

- Lyophilised for enhanced stability
- 100% human whole blood
- Treated in the same manner as a patient sample (requires pre-treatment)
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 28 days at 2°C to 8°C

### Calibrator

- Liquid ready-to-use
- 100% human whole blood
- Treated in the same manner as a patient sample (requires pre-treatment)
- Stable to expiry date at 2°C to 8°C
- Open vial stability of 28 days at 2°C to 8°C
- Multi-point calibrator

Description	Size	Cat. No.
HbA1c Control Set Level 1 and 2	2 x 2 x 0.5 ml	HA5072
HbA1c Calibrator Series	5 x 2 ml, 1 x 8 ml	HA3444

## Liquid HbA1c Control

Delivering an assayed QC solution for HbA1c testing, our Acusera Liquid HbA1c control offers a liquid ready-to-use format ideal for both laboratory and POCT testing. Employing our Liquid HbA1c Control in your laboratory could reduce preparation time, whilst the 30 day stability will ultimately minimise waste and costs.

- Liquid ready-to-use
- Human based whole blood
- Suitable for use in POCT
- Treated in the same manner as a patient sample (requires pre-treatment)
- Assayed target values are supplied for HPLC
- Stable to expiry date at 2°C to 8°C
- Open vial stability of 30 days at 2°C to 8°C

Description	Size	Cat. No.
Liquid HbA1c Control Level 1	6 x 1 ml	HA10224
Liquid HbA1c Control Level 2	6 x 1 ml	HA10225
Liquid HbA1c Control Set	2 x 2 x 0.5 ml	HA10155

## G-6-PDH (Glucose-6-Phosphate Dehydrogenase) Control

The Randox Acusera G-6-PDH control is designed specifically to monitor the accuracy and precision of G-6-PDH assays. Two levels of control are available covering both normal and deficient concentration ranges.

- Lyophilised for enhanced stability
- Stabilised red cell haemolysate
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 5 days at 2°C to 8°C

Description	Size	Cat. No.
G-6-PDH Control Deficient	6 x 0.5 ml	PD2617
G-6-PDH Control Normal	6 x 0.5 ml	PD2618

# DIABETES AND WHOLE BLOOD

## Fructosamine Control and Calibrator

The Acusera Fructosamine control is specifically designed to monitor the accuracy and precision of fructosamine assays. An extended reconstituted stability of 28 days at 2°C to 8°C keeps waste to a minimum and helps to reduce costs.

- Lyophilised for enhanced stability
- Aqueous Based Material
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 28 days at 2°C to 8°C
- Single point calibrator

Description	Size	Cat. No.
Fructosamine Control Level 1	3 x 1 ml	FR2994
Fructosamine Control Level 3	3 x 1 ml	FR2996
Fructosamine Calibrator	3 x 1 ml	FR2993

# IMMUNOASSAY CONTROLS

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As one of the most comprehensive control ranges on the market, the Acusera Immunoassay offering from Randox will streamline QC in any laboratory. With multiple immunoassay controls to choose from, combining up to 55 analytes in a single vial, choice and flexibility is guaranteed. Our unique combination of analytes enables complete test menu consolidation, ultimately reducing costs without compromising on quality or performance. All controls in our Immunoassay range are manufactured from 100% human serum. This matrix ensures the test system will react to the control in the same manner as a patient sample, therefore meeting ISO 15189:2012 requirements while also eliminating shifts in QC target values when reagent batch is changed.

Immunoassay Product Range			
Product Description	Size	Cat. No.	Page No.
AMH Control Level 1	3 x 2 ml	AMH10509	36
AMH Control Level 2	3 x 2 ml	AMH10514	36
AMH Control Level 3	3 x 2 ml	AMH10515	36
AMH Control Level 4	3 x 2 ml	AMH10516	36
Liquid Immunoassay Premium Tri-Level	4 x 3 x 5 ml	LIA3108	36
PTH Control Level 1	3 x 3 ml	PTH10110	37
PTH Control Level 2	3 x 3 ml	PTH10111	37
PTH Control Level 3	3 x 3 ml	PTH10112	37
Immunoassay Premium Level 1	12 x 5 ml	IA2638	37
Immunoassay Premium Level 2	12 x 5 ml	IA2639	37
Immunoassay Premium Level 3	12 x 5 ml	IA2640	37
Immunoassay Premium Tri-Level	4 x 3 x 5 ml	IA2633	37
Immunoassay Premium Plus Level 1	12 x 5 ml	IA3109	38
Immunoassay Premium Plus Level 2	12 x 5 ml	IA3110	38
Immunoassay Premium Plus Level 3	12 x 5 ml	IA3111	38
Immunoassay Premium Plus Tri-Level	4 x 3 x 5 ml	IA3112	38
Immunoassay Speciality I Level 1	5 x 2 ml	IAS3113	39
Immunoassay Speciality I Level 2	5 x 2 ml	IAS3114	39
Immunoassay Speciality I Level 3	5 x 2 ml	IAS3115	39
Immunoassay Speciality II Level 1	5 x 1 ml	IAS3117	39
Immunoassay Speciality II Level 2	5 x 1 ml	IAS3118	39
Immunoassay Speciality II Level 3	5 x 1 ml	IAS3119	39
Tumour Marker Control Level 2	3 x 2 ml	TU5002	40
Tumour Marker Control Level 3	3 x 2 ml	TU5003	40
Maternal Screening Control Level 1	3 x 1 ml	MSS5024	40
Maternal Screening Control Level 2	3 x 1 ml	MSS5025	40
Maternal Screening Control Level 3	3 x 1 ml	MSS5026	40



Liquid  
ready-to-use



Liquid  
frozen



Lyophilised for  
enhanced stability



Assayed target  
values provided



100% human  
matrix

Anti-Müllerian Hormone (AMH) Control 

The Randox Acusera AMH control is designed to use as a third party control for the quantitative determination of Anti-Müllerian Hormone (AMH). An AMH test is often used to check a woman’s ability to produce eggs that can be fertilized for pregnancy. The number declines as a woman gets older. AMH levels help show how many potential egg cells a woman has left. Thus, helping women to make informed decisions about their health.

- Liquid frozen
- Human based serum
- Available at recommended cut-off values for AMH
- Assayed target values and ranges for a wide range of immunoassay systems
- Stable to expiry date at -20°C to -80°C
- Open vial stability of 30 days at 2°C to 8°C

Description	Size	Cat. No.
AMH Control Level 1	3 x 2 ml	AMH10509
AMH Control Level 2	3 x 2 ml	AMH10514
AMH Control Level 3	3 x 2 ml	AMH10515
AMH Control Level 4	3 x 2 ml	AMH10516

Liquid Immunoassay Premium Control 

Analytes			
17-OH-Progesterone	Ethosuximide	Paracetamol	T3 (Free)
α-Fetoprotein (AFP)	Ferritin	Phenobarbitone	T3 (Total)
Aldosterone	Folate	Phenytoin	T4 (Free)
Amikacin	FSH	Primidone	T4 (Total)
β-2-Microglobulin	Gentamicin	Progesterone	Testosterone
Carbamazepine	Growth Hormone (GH)	Prolactin	Theophylline
CEA	hCG	PSA (Free)	Tobramycin
Cortisol	Immunoglobulin E (IgE)	PSA (Total)	TSH
DHEA-Sulphate	Insulin	Salicylate	Valproic Acid
Digoxin	Luteinising Hormone (LH)	Sex Hormone Binding Globulin (SHBG)	Vancomycin
Estriol	Oestradiol	T Uptake	Vitamin B <sub>12</sub>

The Liquid Immunoassay Premium Control has been designed for use in the routine monitoring of accuracy and precision of multiple instruments. Consolidating up to 44 analytes in a single vial, employing this control can reduce the number of controls required to cover your complete test menu, saving time and money. As a true third party control, assayed values are available for most immunoassay platforms and a wide range of analytes, including hormones, therapeutic drugs and vitamins.

- Liquid frozen
- 100% human serum
- Ferritin and Vitamin B<sub>12</sub> levels suitable for Anaemia monitoring
- Stable to expiry date at -20°C to -70°C
- Open vial stability of up to 7 days at 2°C to 8°C

Description	Size	Cat. No.
Liquid Immunoassay Premium Tri-Level	4 x 3 x 5 ml	LIA3108

# IMMUNOASSAY

## PTH Control

The Acusera PTH Control is an assayed, true third party control designed to complement our Immunoassay range, delivering an unbiased, independent assessment of analytical performance. With an open vial stability of 30 days, waste is kept to a minimum.

- Liquid frozen
- 100% human serum
- Assayed target values and ranges for a wide range of immunoassay systems
- Stable to expiry date at -20°C to -70°C
- Open vial stability of 30 days at 2°C to 8°C

Description	Size	Cat. No.
PTH Control Level 1	3 x 3 ml	PTH10110
PTH Control Level 2	3 x 3 ml	PTH10111
PTH Control Level 3	3 x 3 ml	PTH10112

## Immunoassay Premium Control

Analytes			
17-OH-Progesterone	DHEA-Sulphate	Oestradiol	T3 (Free)
1-25-(OH) <sub>2</sub> -Vitamin D	Digoxin	Paracetamol	T3 (Total)
25-OH-Vitamin D	Estriol	Phenobarbitone	T4 (Free)
α-Fetoprotein (AFP)	Ethosuximide	Phenytoin	T4 (Total)
ACTH <sup>+</sup>	Ferritin	Primidone	Testosterone
Aldosterone	Folate	Progesterone	Testosterone (Free)
Amikacin	FSH	Prolactin	Theophylline
Androstenedione	Gentamicin	PSA (Free)	Thyroglobulin
β-2-Microglobulin	Growth Hormone (GH)	PSA (Total)	Tobramycin
C-Peptide	hCG	PTH (Parathyroid Hormone)*	TSH
Carbamazepine	Immunoglobulin E (IgE)	Salicylate	Valproic Acid
CEA	Insulin	Sex Hormone Binding Globulin (SHBG)	Vancomycin
Cortisol	Luteinising Hormone (LH)	T Uptake	Vitamin B <sub>12</sub>

Efficiently combining 52 analytes in total, the Immunoassay Premium Control is designed to cover routine immunoassay testing in a single vial. The additional benefit of clinically relevant concentrations will not only ensure accurate performance at key decision levels, but will also eliminate the need for additional low/high controls at extra expense. As an assayed control, instrument specific target values and ranges are provided for up to 48 analytes, including fertility, thyroid & steroid hormones, kidney function tests, therapeutic drugs and vitamins, saving you time assigning these in-house. Manufactured using 100% human serum, this control is designed to directly mimic a patient sample, reducing costly shifts when reagent batch is changed.

- Lyophilised for enhanced stability
- 100% human serum
- Ferritin and Vitamin B<sub>12</sub> levels suitable for Anaemia monitoring
- Ultra low TSH levels in the level 1 control
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of up to 7 days at 2°C to 8°C, or up to 28 days at -20°C

Description	Size	Cat. No.
Immunoassay Premium Level 1	12 x 5 ml	IA2638
Immunoassay Premium Level 2	12 x 5 ml	IA2639
Immunoassay Premium Level 3	12 x 5 ml	IA2640
Immunoassay Premium Tri-level	3x 4 x 5 ml	IA2633

\*Values may not be provided for all levels  
\*No claims are made regarding value or stability



Immunoassay Premium Plus Control 

Analytes			
17-OH-Progesterone	CEA	Luteinising Hormone (LH)	T3 (Free)
1-25-(OH) <sub>2</sub> -Vitamin D	Cortisol	Oestradiol	T3 (Total)
25-OH-Vitamin D	DHEA-Sulphate	Paracetamol	T4 (Free)
α-Fetoprotein (AFP)	Digoxin	Phenobarbitone	T4 (Total)
ACTH <sup>+</sup>	Estriol	Phenytoin	Testosterone
Aldosterone	Ethosuximide	Primidone	Testosterone (Free)
Amikacin	Ferritin	Progesterone	Theophylline
Androstenedione	Folate	Prolactin	Thyroglobulin
β-2-Microglobulin	FSH	PSA (Free)	Tobramycin
C-Peptide	Gentamicin	PSA (Total)	TSH
CA 15-3	Growth Hormone (GH)	PTH (Parathyroid Hormone)*	Valproic Acid
CA 19-9	hCG	Salicylate	Vancomycin
CA 125	Immunoglobulin E (IgE)	Sex Hormone Binding Globulin (SHBG)	Vitamin B <sub>12</sub>
Carbamazepine	Insulin	T Uptake	

Impressively covering 55 analytes including tumour markers, therapeutic drugs and routine immunoassay tests, the Acusera Immunoassay Premium Plus control has been uniquely designed to eliminate the need for four or more controls, dramatically reducing costs and time. The added advantage of ultra low levels of Ferritin, Vitamin B<sub>12</sub> and TSH will ensure accurate performance at key decision levels and further reduce the number of controls required. Assayed target values are supplied for 51 analytes in this true third party control. Manufactured using 100% human serum, this control is designed to directly mimic a patient sample, reducing costly shifts when reagent batch is changed.

- Lyophilised for enhanced stability
- 100% human serum
- Ferritin and Vitamin B<sub>12</sub> levels suitable for Anaemia monitoring
- Ultra low TSH levels in the level 1 control
- Contains routinely run tumour markers: AFP / CA15-3 / CA19-9 / CA-125 / CEA / PSA / Free-PSA
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of up to 7 days at 2°C to 8°C or 28 days at -20°C

Description	Size	Cat. No.
Immunoassay Premium Plus Level 1	12 x 5 ml	IA3109
Immunoassay Premium Plus Level 2	12 x 5 ml	IA3110
Immunoassay Premium Plus Level 3	12 x 5 ml	IA3111
Immunoassay Premium Plus Tri-level	3x 4 x 5 ml	IA3112

\*Values may not be provided for all levels  
 \*No claims are made regarding value or stability

# IMMUNOASSAY

## Immunoassay Speciality I Control

Analytes			
1-25-(OH) <sub>2</sub> -Vitamin D 25-OH-Vitamin D Anti-Thyroglobulin (Anti-TG)	Anti-Thyroperoxidase (Anti-TPO) C-Peptide Insulin	Insulin Like Growth Factor-1(IGF-1) Intact PTH (Parathyroid Hormone) Osteocalcin	Procalcitonin

Covering 10 specialised analytes, the Acusera Immunoassay Speciality I control is designed to complement our standard immunoassay control, meeting the demands of today's modern laboratory. Assayed target values are supplied for all 10 analytes in this true third party control.

- Lyophilised for enhanced stability
- 100% human serum
- Assayed target values and ranges for a wide range of immunoassay systems
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of up to 5 days at 2°C to 8°C or 28 days at -20°C. C-Peptide and Procalcitonin are stable for 1 day at 2°C to 8°C. IGF-1 is stable for 8 hours at 2°C to 8°C.

Description	Size	Cat. No.
Immunoassay Speciality I Level 1	5 x 2 ml	IAS3113
Immunoassay Speciality I Level 2	5 x 2 ml	IAS3114
Immunoassay Speciality I Level 3	5 x 2 ml	IAS3115

## Immunoassay Speciality II Control

Analytes			
Calcitonin	Gastrin	Procalcitonin	Renin

Designed for the routine monitoring of more complex, specialised analytes, the Acusera Immunoassay Speciality II control complements our standard immunoassay controls. As a true third party control, assayed target values are supplied and unbiased performance assessment guaranteed.

- Lyophilised for enhanced stability
- 100% human serum
- Assayed target values and ranges for a wide range of immunoassay systems
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 5 days at 2°C to 8°C for Renin, 1 day at 2°C to 8°C for Procalcitonin and 8 hours at 2°C to 8°C for Gastrin and Calcitonin. Stable for 28 days at -20°C

Description	Size	Cat. No.
Immunoassay Speciality II Level 1	5 x 1 ml	IAS3117
Immunoassay Speciality II Level 2	5 x 1 ml	IAS3118
Immunoassay Speciality II Level 3	5 x 1 ml	IAS3119

Tumour Marker Control 

Analytes			
α-Fetoprotein (AFP) β-2-Microglobulin CA 15-3 CA 19-9	CA 72-4 CA 125 Calcitonin CEA	CYFRA 21-1 Ferritin hCG NSE	PSA (Free) PSA (Total) Thyroglobulin

The multi-analyte Acusera Tumour Marker control has been designed for use in the daily monitoring of 15 routine and specialised tumour markers. This true third party control is provided with assayed target values and ranges for all analytes, ensuring an unbiased assessment of performance for a wide range of immunoassay instruments.

- Lyophilised for enhanced stability
- 100% human serum
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of up to 14 days at 2°C to 8°C

Description	Size	Cat. No.
Tumour Marker Control Level 2	3 x 2 ml	TU5002
Tumour Marker Control Level 3	3 x 2 ml	TU5003

Maternal Screening Control 

Analytes			
α-Fetoprotein (AFP) Free β-hCG	Inhibin A PAPP-A	Total β-hCG	Unconjugated Oestriol

Delivering an assayed, multi-analyte QC solution for laboratories carrying out maternal screening, the Acusera Maternal Screening control covers a unique combination of analytes, ensuring suitability for both First and Second Trimester screening of Down’s syndrome & Spina Bifida. By employing our Maternal Screening Control you could replace up to three competitor controls, ultimately improving efficiency, while reducing costs and preparation time.

- Lyophilised for enhanced stability
- 100% human serum
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 7 days at 2°C to 8°C

Description	Size	Cat. No.
Maternal Screening Control Level 1	3 x 1 ml	MSS5024
Maternal Screening Control Level 2	3 x 1 ml	MSS5025
Maternal Screening Control Level 3	3 x 1 ml	MSS5026

# IMMUNOLOGY/ PROTEIN CONTROLS

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The Acusera range of Immunology/Protein Controls has been designed to be both cost effective and convenient. Requiring no preparation or thawing, the liquid ready-to-use format will increase productivity and efficiency in even the most demanding laboratories. Furthermore, an open vial stability of thirty days for all analytes, with no exceptions, will reduce costs and keep waste to a minimum.\*

\* Our Acusera CSF Control comes in a lyophilised format and requires reconstitution. It has a 14 day reconstituted stability.

Immunology/Protein Product Range			
Product Description	Size	Cat. No.	Page No.
Specific Protein Control Level 1	3 x 1 ml	PS2682	43
Specific Protein Control Level 2	3 x 1 ml	PS2683	43
Specific Protein Control Level 3	3 x 1 ml	PS2684	43
Specific Protein Control Level 1	6 x 3 ml	PS10221	43
Specific Protein Control Level 2	6 x 3 ml	PS10222	43
Specific Protein Control Level 3	6 x 3 ml	PS10223	43
Specific Protein Calibrator (Liquid)	5 x 1 ml	IT2691	43
Specific Protein Calibrator (Liquid)	5 x 1 ml	IT2692	44
Liquid CRP Control Level 2	10 x 1 ml	CP2480	44
Liquid CRP Control Level 3	10 x 1 ml	CP2481	44
High Sensitivity CRP Control Level 1	10 x 1 ml	CP2476	44
High Sensitivity CRP Control Level 2	10 x 1 ml	CP2477	44
High Sensitivity CRP Calibrator Series	6 x 2 ml	CP2478	44
CRP Full Range Calibrator	6 x 1 ml	CP2499	44
Canine CRP Control Level 2	3 x 1 ml	CP2803	44
Canine CRP Control Level 3	3 x 1 ml	CP2804	44
CSF Control Level 2	10 x 3 ml	CF1500	45
CSF Control Level 3	10 x 3 ml	CF1501	45
Liquid CSF Control Level 1	10 x 3 ml	CF10138	45
Liquid CSF Control Level 2	10 x 3 ml	CF10139	45
$\beta$ -2-Microglobulin Calibrator	3 x 1 ml	BM10444	45
$\beta$ -2-Microglobulin Calibrator	3 x 1 ml	BM1362	45
Cystatin C Control Level 2	3 x 2 ml	CYS10446	46
Cystatin C Control Level 3	3 x 2 ml	CYS10447	46
Cystatin C Calibrator	5 x 2 ml	CYS10445	46
Immunoglobulin Liquid Protein Calibrator	3 x 1 ml	IT3861	46
IgE Calibrator Series	6 x 1 ml	IE2492	46
sTfR Control Level 1 & 2	3 x 2 x 1 ml	TF10162	47
sTfR Calibrator	6 x 1 ml	TF10161	47



Liquid  
ready-to-use



Liquid  
frozen



Lyophilised for  
enhanced stability



Assayed target  
values provided



100% human  
matrix

# IMMUNOLOGY/PROTEIN

## Specific Protein Control

Analytes			
<ul style="list-style-type: none"> <li>α-1-Acid Glycoprotein</li> <li>α-1-Antitrypsin</li> <li>α-2-Macroglobulin</li> <li>α-Fetoprotein (AFP)</li> <li>Albumin</li> <li>Anti-Streptolysin O (ASO)</li> <li>Anti-Thrombin III (AT III)</li> </ul>	<ul style="list-style-type: none"> <li>β-2-Microglobulin</li> <li>Ceruloplasmin</li> <li>Complement C3</li> <li>Complement C4</li> <li>CRP</li> <li>Ferritin</li> <li>Haptoglobin</li> </ul>	<ul style="list-style-type: none"> <li>Immunoglobulin A (IgA)</li> <li>Immunoglobulin E (IgE)</li> <li>Immunoglobulin G (IgG)</li> <li>Immunoglobulin M (IgM)</li> <li>Kappa Light Chain</li> <li>Lambda Light Chain</li> <li>Lambda Light Chain (Free)*</li> </ul>	<ul style="list-style-type: none"> <li>Prealbumin Protein (Total)</li> <li>Retinol Binding Protein (RBP)</li> <li>Rheumatoid Factor (RF)</li> <li>Transferrin</li> </ul>

Covering a unique combination of 26 serum proteins, including; Total Kappa and Lambda Light Chains, the Acusera Specific Protein Control could replace as many as three separate controls. Supplied in a user-friendly liquid ready-to-use format with a 30 day open vial stability for all analytes, waste and preparation time are kept to a minimum. Manufactured using 100% human serum, this control is designed to directly mimic a patient sample, reducing costly shifts when reagent batch is changed and ensuring accurate patient testing. Assayed target values and ranges are provided for this true third party control.

- Liquid ready-to-use
- 100% human serum
- Contains both Total Kappa and Lambda Light Chains
- Stable to expiry date at 2°C to 8°C
- Open vial stability of 30 days at 2°C to 8°C

Description	Size	Cat. No.
Specific Protein Control Level 1	3 x 1 ml	PS2682
Specific Protein Control Level 2	3 x 1 ml	PS2683
Specific Protein Control Level 3	3 x 1 ml	PS2684
Specific Protein Control Level 1	6 x 3 ml	PS10221
Specific Protein Control Level 2	6 x 3 ml	PS10222
Specific Protein Control Level 3	6 x 3 ml	PS10223

\*Not for use in USA.

## Specific Protein Calibrator

Analytes			
<ul style="list-style-type: none"> <li>Anti-Streptolysin O (ASO)</li> <li>Ceruloplasmin</li> <li>Complement C3</li> <li>Complement C4</li> </ul>	<ul style="list-style-type: none"> <li>CRP</li> <li>Ferritin</li> <li>Haptoglobin</li> </ul>	<ul style="list-style-type: none"> <li>Immunoglobulin A (IgA)</li> <li>Immunoglobulin G (IgG)</li> <li>Immunoglobulin M (IgM)</li> </ul>	<ul style="list-style-type: none"> <li>Prealbumin</li> <li>Rheumatoid Factor (RF)</li> <li>Transferrin</li> </ul>

Multi-analyte calibrator designed for use in the routine calibration of 13 serum proteins including Ferritin, IgA, IgG and IgM. Supplied in a convenient, liquid ready-to-use format with a working stability of 30 days, waste and time are kept to a minimum.

- Liquid ready-to-use
- 100% human serum
- Stable to expiry date at 2°C to 8°C
- Open vial stability of 30 days at 2°C to 8°C
- Multi-point calibrator

Description	Size	Cat. No.
Specific Protein Calibrator (Liquid)	5 x 1 ml	IT2691

**FOR USE WITH SAMPLES THAT DO NOT REQUIRE PRE-DILUTION**

## Specific Protein Calibrator - Requires pre-dilution

Analytes		
Immunoglobulin A (IgA)	Immunoglobulin G (IgG)	Immunoglobulin M (IgM)

Multi-analyte calibrator designed for use in the routine calibration of 3 serum proteins. Supplied in a convenient, liquid ready-to-use format with a working stability of 30 days, waste and time are kept to a minimum.

- **Liquid ready-to-use**
- **100% human serum**
- **Stable to expiry date at 2°C to 8°C**
- **Open vial stability of 30 days at 2°C to 8°C**
- **Multi-point calibrator**

Description	Size	Cat. No.	
Specific Protein Calibrator (Liquid)	5 x 1 ml	IT2692	<b>FOR USE WITH SAMPLES THAT REQUIRE PRE-DILUTION</b>

## CRP Controls and Calibrator

A choice of two dedicated CRP controls is available, covering elevated and highly sensitive levels of CRP. As true third party controls, assayed target values are provided, ensuring unbiased performance assessment with any instrument or method. Conveniently supplied in a liquid ready-to-use format, no preparation is required.

- **Liquid ready-to-use**
- **100% human material**
- **Stable to expiry date at 2°C to 8°C**
- **Open vial stability of 30 days at 2°C to 8°C**
- **Multi-point calibrator**

Description	Size	Cat. No.
Liquid CRP Control Level 2	10 x 1 ml	CP2480
Liquid CRP Control Level 3	10 x 1 ml	CP2481
High Sensitivity CRP Control Level 1	10 x 1 ml	CP2476
High Sensitivity CRP Control Level 2	10 x 1 ml	CP2477
High Sensitivity CRP Calibrator Series	6 x 2 ml	CP2478
CRP Full Range Calibrator	6 x 1 ml	CP2499

## Canine CRP Control

Dedicated CRP control uniquely designed for use in the quality control of the Randox Canine CRP assay. Supplied in a convenient, liquid ready-to-use format and stable to expiry date, waste and preparation time is kept to an absolute minimum.

- **Liquid ready-to-use**
- **Human CRP in a stabilised protein matrix**
- **Stable to expiry date at 2°C to 8°C**
- **Once opened stable to expiry date at 2°C to 8°C**

Description	Size	Cat. No.
Canine CRP Control Level 2	3 x 1 ml	CP2803
Canine CRP Control Level 3	3 x 1 ml	CP2804

# IMMUNOLOGY/PROTEIN

## CSF Control

Analytes			
$\alpha$ -1-Globulin (Electrophoresis)*	$\beta$ -Globulin (Electrophoresis)*	Glucose	Protein (Total)
$\alpha$ -2-Globulin (Electrophoresis)*	Chloride	Immunoglobulin G (IgG)	Sodium
Albumin (Electrophoresis)*	$\gamma$ -Globulin (Electrophoresis)*	Lactate	

Multi-analyte CSF control designed for use in the routine monitoring of both accuracy and precision. As a true third party control, it is compatible for use with a wide range of clinical analysers. Assayed target values are provided, eliminating the need to assign in-house.

- Lyophilised for enhanced stability
- Human based material
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 14 days at 2°C to 8°C

Description	Size	Cat. No.
CSF Control Level 2	10 x 3 ml	CF1500
CSF Control Level 3	10 x 3 ml	CF1501

\*No claims are made regarding values or stability.

## Liquid CSF Control

Analytes			
$\alpha$ -1-Globulin (Electrophoresis)*	Chloride	High Sensitivity Immunoglobulin G (hslgG)	Microalbumin
$\alpha$ -2-Globulin (Electrophoresis)*	$\gamma$ -Globulin (Electrophoresis)*	High Sensitivity Immunoglobulin M	Protein (Total)
Albumin (Electrophoresis)*	Glucose	(hslgM)*	Sodium
$\beta$ -Globulin (Electrophoresis)*	High Sensitivity Immunoglobulin A (hslgA)*	Lactate	

Providing a true third party solution for the measurement of 14 analytes in Cerebrospinal Fluid (CSF), the new Acusera Liquid CSF Control is designed to deliver an unbiased, independent assessment of analytical performance, helping to ensure accurate and reliable patient testing. With an extended open vial stability of 30 days at 2°C to 8°C, this control will reduce waste, while remaining easy and convenient to use. Two distinct levels are available covering clinically significant ranges.

- Liquid ready-to-use
- Human based material
- Stable to expiry date at 2°C to 8°C
- Open vial stability of 30 days at 2°C to 8°C

Description	Size	Cat. No.
Liquid CSF Control Level 1	10 x 3 ml	CF10138
Liquid CSF Control Level 2	10 x 3 ml	CF10139

\*No claims are made regarding values or stability.

## $\beta$ -2-Microglobulin Calibrator

Our dedicated  $\beta$ -2-Microglobulin calibrators are designed for use in the calibration of  $\beta$ -2-Microglobulin assays. With an excellent working stability of 30 days at 2°C to 8°C, waste is kept to a minimum.

- Lyophilised for enhanced stability
- 100% human serum
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 30 days at 2°C to 8°C or 3 months at -20°C
- Single point calibrator

Description	Size	Cat. No.
$\beta$ -2-Microglobulin Calibrator	3 x 1 ml	BM10444
$\beta$ -2-Microglobulin Calibrator	3 x 1 ml	BM1362



## Cystatin C Control and Calibrator

Dedicated Cystatin C control designed for use in the routine monitoring of both accuracy and precision. Supplied in a convenient, liquid ready-to-use format, no preparation is required. Assayed target values and ranges are provided for this true third party control.

- Liquid ready-to-use
- 100% human serum
- Stable to expiry date at 2°C to 8°C
- Open vial stability of 30 days at 2°C to 8°C
- Multi-point calibrator

Description	Size	Cat. No.
Cystatin C Control Level 2	3 x 2 ml	CYS10446
Cystatin C Control Level 3	3 x 2 ml	CYS10447
Cystatin C Calibrator	5 x 2 ml	CYS10445

## Immunoglobulin Liquid Protein Calibrator

Analytes		
Immunoglobulin A (IgA)	Immunoglobulin G (IgG)	Immunoglobulin M (IgM)

Calibrator series designed for use in the calibration of IgA, IgG and IgM immunoturbidimetric assays. Suitable for use with the Randox immunoglobulin assays.

- Liquid ready-to-use
- 100% human serum
- Stable to expiry date at 2°C to 8°C
- Open vial stability of 30 days at 2°C to 8°C
- Single point calibrator

Description	Size	Cat. No.
Immunoglobulin Liquid Protein Calibrator	3 x 1 ml	IT3861

## IgE Calibrator

Comprising 6 levels, our IgE calibrator series is designed for use in the calibration of IgE immunoturbidimetric assays. With an excellent working stability of 28 days at 2°C to 8°C, waste is kept to a minimum.

- Lyophilised for enhanced stability
- Human IgE in a stabilised matrix
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 28 days at 2°C to 8°C
- Multi-point calibrator

Description	Size	Cat. No.
IgE Calibrator Series	6 x 1 ml	IE2492

# IMMUNOLOGY/PROTEIN

## Soluble Transferrin Receptor (sTfR) Control and Calibrator Series

Providing a true third party solution for the measurement of Soluble Transferrin Receptor (sTfR), the Acusera control will deliver an unbiased, independent assessment of analytical performance. Designed for use with sTfR assays, this single analyte control saves money on wasted material.

- Lyophilised control
- Human based material
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 28 days at 2°C to 8°C
- Multi-point calibrator

Description	Size	Cat. No.
sTfR Control Level 1 & 2	3 x 2 x 1 ml	TF10162
sTfR Calibrator	6 x 1 ml	TF10161

# INFECTIOUS DISEASE CONTROLS (SEROLOGY)

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The Acusera range of serology controls is designed to deliver a cost effective, high quality solution for the analysis of infectious diseases using our multi-marker controls that cover a wide range of testing. These liquid ready-to-use controls come with an unrivalled 60 day open-vial stability whilst helping laboratories save time and money with added consolidation. Negative controls are also available within our Serology Controls portfolio.

# INFECTIOUS DISEASE (SEROLOGY)

Infectious Disease (Serology) Product Range			
Product Description	Size	Cat. No.	Page No.
Anti SARS-CoV-2 Controls	2 x 2 x 4 ml	COV10460	50
Anti-SARS-CoV-2 Spike Controls	2 x 2 x 4 ml	COV10533	50
EBV Positive Control	1 x 5 ml	SR10350	50
Lyme Disease Negative Control	1 x 5 ml	SR10345	51
Lyme Disease Positive Control	1 x 5 ml	SR10346	51
HBeAg Positive Control	1 x 5 ml	SR10459	51
HIV-1 P24Ag Positive Control	1 x 5 ml	SR10458	51
Serology Negative Control	6 x 5 ml	SR10351	51
Serology I Positive Control	3 x 5 ml	SR10352	51
Serology II Positive Control	3 x 5 ml	SR10353	51
Serology III Positive Control	3 x 5 ml	SR10354	51
ToRCH Negative Control	6 x 5 ml	SR10347	52
ToRCH IgG Positive Control	3 x 5 ml	SR10348	52
ToRCH IgM Positive Control	3 x 5 ml	SR10349	52



Liquid ready-to-use



Liquid frozen



Lyophilised for enhanced stability



Assayed target values provided



100% human matrix

# INFECTIOUS DISEASE (SEROLOGY)

## Anti-SARS-CoV-2 Controls

Comprising both reactive and non-reactive controls for SARS-CoV-2 total antibodies, the Acusera range is designed to assess the precision of serological assays for COVID-19. As a true third party control, independent performance assessment is guaranteed.

- Liquid ready-to-use
- 100% human plasma
- Reactive and non-reactive controls available
- Stable to expiry date at 2°C to 8°C
- Open vial stability of 30 days at 2°C to 8°C

Description	Size	Cat. No.
Anti-SARS-CoV-2 Controls	2 x 4ml (Positive) 2 x 4ml (Negative)	COV10460

If running the SARS-CoV-2 for spike protein, please be aware that positive control will need to be diluted for spike protein antibodies.

## Anti-SARS-CoV-2 Spike Control

SARS-CoV-2 Spike negative/non-reactive and positive/reactive controls are intended for use with in vitro assays for the determination of spike antibodies to SARS-CoV-2. These controls are unassayed and are suitable for use on various analysers, therefore making them useful in determining the precision of testing systems and allows performance monitoring of multiple test systems.

- Liquid ready-to-use
- 100% human plasma
- Reactive and non-reactive controls available
- Stable to expiry date at 2°C to 8°C
- Open vial stability of 30 days at 2°C to 8°C

Description	Size	Cat. No.
Anti-SARS-CoV-2 Spike Controls	2 x 4 ml (Positive) 2 x 4 ml (Negative)	COV10533

## Epstein Barr Virus (EBV) Control

### Analytes

Epstein Barr Virus (EBV) EBNA IgG

Epstein Barr Virus (EBV) VCA IgG

Epstein Barr Virus (EBV) IgM

The Acusera EBV control is conveniently supplied as liquid ready-to-use and is suitable for use with most immunoassay analysers.

- Liquid ready-to-use
- Human based serum
- Stable to expiry date at 2°C to 8°C
- Open vial stability of 60 days at 2°C to 8°C
- Suitable for use with most immunoassay analysers

Description	Size	Cat. No.
EBV Positive Control	1 x 5 ml	SR10350

# INFECTIOUS DISEASE (SEROLOGY)

## Lyme Disease (*Borrelia burgdorferi*) Control

### Analytes

*Borrelia burgdorferi* IgG

*Borrelia burgdorferi* IgM

Our control delivers a true third-party solution for the detection of Lyme Disease on most immunoassay analysers. All samples are conveniently supplied in a user-friendly, liquid ready-to-use format.

- Liquid ready-to-use
- 100% human plasma
- Stable to expiry date at 2°C to 8°C
- Open vial stability of 60 days at 2°C to 8°C
- Suitable for use with most immunoassay analysers

Description	Size	Cat. No.
Lyme Disease Negative Control	1 x 5 ml	SR10345
Lyme Disease Positive Control	1 x 5 ml	SR10346

## Serology Controls

### Analytes

**HBeAg Positive (RUO)**  
HBeAg

Anti-HCV  
Anti-HIV 1 / 2  
Anti-HTLV 1 / 2

**Serology I Positive**

Anti-HBc

Anti-HCV

Anti-HIV 1 / 2

Anti-HTLV 1 / 2

HBsAg

*Treponema pallidum* (Syphilis)

IgG

**Serology II Positive**

Anti-HAV

Anti-HBc

Anti-HBe

Anti-HBs

**HIV-1 P24 Ag Positive (RUO)**

HIV-1 P24Ag

HAV IgM

HBc IgM

HBeAg

HBsAg

HIV P24Ag

*Treponema pallidum* (Syphilis)

IgG

**Serology Negative**

Anti-HAV

Anti-HBc

Anti-HBe

Anti-HBs

**Serology III Positive**

HAV IgM

HBc IgM

The Acusera Serology control range comprises both positive and negative controls for a wide range of pathogens including HIV & Hepatitis, are supplied as liquid ready-to-use and are suitable for use on most immunoassay analysers.

- Liquid ready-to-use
- 100% human plasma
- Stable to expiry date at 2°C to 8°C
- Open vial stability of 60 days at 2°C to 8°C
- Suitable for use with most immunoassay analysers

Description	Size	Cat. No.
HBeAg Positive Control	1 x 5 ml	SR10459
HIV-1 P24Ag Positive Control	1 x 5 ml	SR10458
Serology Negative Control	6 x 5 ml	SR10351
Serology I Positive Control	3 x 5 ml	SR10352
Serology II Positive Control	3 x 5 ml	SR10353
Serology III Positive Control	3 x 5 ml	SR10354

# INFECTIOUS DISEASE (SEROLOGY)

## ToRCH Controls

Analytes		
<p><b>ToRCH Negative</b></p> <p>Cytomegalovirus (CMV) IgG                      Cytomegalovirus (CMV) IgM                      Epstein Barr Virus (EBV) EBNA IgG                      Epstein Barr Virus (EBV) VCA IgG                      Epstein Barr Virus (EBV) IgM  <i>Helicobacter pylori</i> IgG                      Herpes Simplex Virus 1 (HSV-1) IgG                      Herpes Simplex Virus 1 (HSV-1) IgM                      Herpes Simplex Virus 2 (HSV-2) IgG                      Herpes Simplex Virus 2 (HSV-2) IgM                      Measles IgG                      Mumps IgG</p>	<p>Rubella IgG                      Rubella IgM                      Toxoplasma <i>gondii</i> IgG                      Toxoplasma <i>gondii</i> IgM  <i>Treponema pallidum</i> (Syphilis) IgG                      Varicella Zoster Virus (VZV) IgG</p> <p><b>ToRCH IgG Positive</b></p> <p>Cytomegalovirus (CMV) IgG  <i>Helicobacter pylori</i> IgG                      Herpes Simplex Virus 1 (HSV-1) IgG                      Herpes Simplex Virus 2 (HSV-2) IgG                      Measles IgG</p>	<p>Mumps IgG                      Rubella IgG                      Toxoplasma <i>gondii</i> IgG  <i>Treponema pallidum</i> (Syphilis) IgG                      Varicella Zoster Virus (VZV) IgG</p> <p><b>ToRCH IgM Positive</b></p> <p>Cytomegalovirus (CMV) IgM                      Herpes Simplex Virus 1 (HSV-1) IgM                      Herpes Simplex Virus 2 (HSV-2) IgM                      Rubella IgM                      Toxoplasma <i>gondii</i> IgM</p>

Our ToRCH portfolio includes positive controls for both IgG and IgM antibodies in addition to a negative control. Each control is manufactured using human plasma and is suitable for use with most immunoassay analysers. The availability of liquid ready-to-use samples helps to reduce preparation time and the potential for human error.

- Liquid ready-to-use
- Human based serum
- Stable to expiry date at 2°C to 8°C
- Open vial stability of 60 days at 2°C to 8°C
- Suitable for use with most immunoassay analysers

Description	Size	Cat. No.
ToRCH Negative Control	6 x 5 ml	SR10347
ToRCH IgG Positive Control	3 x 5 ml	SR10348
ToRCH IgM Positive Control	3 x 5 ml	SR10349

# LIPID CONTROLS

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Our Acusera Lipid quality controls have been manufactured from 100% human serum to ensure they are commutable, performing in the same manner as a patient sample with minimal lot to lot value shifts. All of our Lipid Controls contain no stabilisers or preservatives, which may affect the overall performance of the controls. The multi-analyte controls enable test menu consolidation which, along with a four year shelf life from the date of manufacture, ensures minimal waste and helps to reduce costs.



Lipid Product Range			
Product Description	Size	Cat. No.	Page No.
Lipid Control Level 1	5 x 1 ml	LE2668	55
Lipid Control Level 2	5 x 1 ml	LE2669	55
Lipid Control Level 3	5 x 1 ml	LE2670	55
Lipid Control Level 1	5 x 3 ml	LE2661	55
Lipid Control Level 2	5 x 3 ml	LE2662	55
Lipid Control Level 3	5 x 3 ml	LE2663	55
Direct HDL/LDL Cholesterol Calibrator (Clearance)	3 x 1 ml	CH2673	55
Apolipoprotein Control Level 1	3 x 1 ml	LE5016	56
Apolipoprotein Control Level 2	3 x 1 ml	LE5017	56
Apolipoprotein Control Level 3	3 x 1 ml	LE5018	56
Apolipoprotein Calibrator	3 x 1 ml	LP3023	56
Apolipoprotein Calibrator 2	3 x 1 ml	LP5047	56
Lipoprotein (a) Control Level 3	3 x 1 ml	LP3406	56
Lipoprotein (a) Calibrator Series	5 x 1 ml	LP3404	56
sLDL Control Level 1	3 x 1 ml	LE5013	56
sLDL Control Level 2	3 x 1 ml	LE5014	56
sLDL Control Level 3	3 x 1 ml	LE5015	56
sLDL Calibrator	3 x 1 ml	CH5050	56



Liquid  
ready-to-use



Liquid  
frozen



Lyophilised for  
enhanced stability



Assayed target  
values provided



100% human  
matrix

# LIPIDS

## Lipid Control

Analytes			
Apolipoprotein A-1 Apolipoprotein B	Cholesterol (HDL) Cholesterol (LDL)	Cholesterol (Total) Lipoprotein (a)	Triglycerides

The Randox Acusera Lipid control is supplied with assayed method specific target values and ranges for 7 analytes, covering the complete lipid profile. Unlike with many manufacturers, the material used in the production of the Randox lipid control does not contain preservatives such as Sodium Azide. This ensures a matrix that is compatible with the patient sample and prevents interference with clearance methods of HDL and LDL. Two flexible and convenient pack sizes are available, providing a true third party solution for laboratories of all sizes.

- Lyophilised for enhanced stability
- 100% human serum
- Sodium Azide is not present - no interference occurs with clearance methods
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of up to 7 days at 2°C to 8°C or 28 days at -20°C

Description	Size	Cat. No.
Lipid Control Level 1	5 x 1 ml	LE2668
Lipid Control Level 2	5 x 1 ml	LE2669
Lipid Control Level 3	5 x 1 ml	LE2670
Lipid Control Level 1	5 x 3 ml	LE2661
Lipid Control Level 2	5 x 3 ml	LE2662
Lipid Control Level 3	5 x 3 ml	LE2663

## Direct LDL/HDL Cholesterol Calibrator

Analytes	
Cholesterol (HDL)	Cholesterol (LDL)

The Acusera Direct LDL/HDL Cholesterol Calibrator has been designed for use in the calibration of HDL and LDL Clearance assays on clinical chemistry analysers.

- Lyophilised for enhanced stability
- 100% human serum
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 5 days at 2°C to 8°C and 1 month at -20°C
- Single point calibrator

Description	Size	Cat. No.
Direct LDL/HDL Cholesterol Calibrator (Clearance)	3 x 1 ml	CH2673

## Apolipoprotein Control and Calibrators

### Analytes

#### Apolipoprotein Control

Apolipoprotein A-II  
Apolipoprotein C-II  
Apolipoprotein C-III  
Apolipoprotein E

#### Apolipoprotein Calibrator

Apolipoprotein A-I  
Apolipoprotein B

#### Apolipoprotein Calibrator 2

Apolipoprotein A-II  
Apolipoprotein C-II  
Apolipoprotein C-III  
Apolipoprotein E

The Acusera Apolipoprotein control has been designed for the routine monitoring of 4 esoteric Apolipoprotein analytes. Complementing our Acusera Apolipoprotein control is the Acusera Apolipoprotein Calibrator, which has been designed for use in the calibration of 6 Apolipoprotein assays on a wide range of clinical chemistry analysers.

- Lyophilised for enhanced stability
- 100% human serum
- Stable to expiry date at 2°C to 8°C
- Control - reconstituted stability of 7 days at 2°C to 8°C for Apolipoprotein A-II, Apolipoprotein C-II and Apolipoprotein C-III, Apolipoprotein E is stable for 8 hours at 2°C to 8°C. All analytes are stable for 4 weeks at -20°C
- Calibrator - reconstituted stability of 7 days at 2°C to 8°C for Apolipoprotein A-II and Apolipoprotein C-II, Apolipoprotein E is stable for 8 hours at 2°C to 8°C. All analytes are stable for 4 weeks at -20°C
- Multi-point calibrator

Description	Size	Cat. No.
Apolipoprotein Control Level 1	3 x 1 ml	LE5016
Apolipoprotein Control Level 2	3 x 1 ml	LE5017
Apolipoprotein Control Level 3	3 x 1 ml	LE5018
Apolipoprotein Calibrator	3 x 1 ml	LP3023
Apolipoprotein Calibrator 2	3 x 1 ml	LP5047

## Lipoprotein (a) Control and Calibrator

The Acusera Lipoprotein (a) control has been designed for the routine monitoring of the Randox Lipoprotein (a) assay. The Acusera Lipoprotein (a) calibrator has been designed to calibrate Lipoprotein (a) assays on clinical chemistry analysers.

- Lyophilised for enhanced stability
- 100% human serum
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 14 days at 2°C to 8°C
- Multi-point calibrator

Description	Size	Cat. No.
Lipoprotein (a) Control Level 3	3 x 1 ml	LP3406
Lipoprotein (a) Calibrator Series	5 x 1 ml	LP3404

## sLDL Control and Calibrator

The Acusera sLDL Control and Calibrator have been designed for the use in the routine monitoring of both accuracy and precision.

- Lyophilised for enhanced stability
- 100% human serum
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 5 days at 2°C to 8°C
- Single point calibrator

Description	Size	Cat. No.
sLDL Control Level 1	3 x 1 ml	LE5013
sLDL Control Level 2	3 x 1 ml	LE5014
sLDL Control Level 3	3 x 1 ml	LE5015
sLDL Calibrator	3 x 1 ml	CH5050

# SPECIALITY AND RESEARCH CONTROLS

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Our Speciality and Research Quality Controls cover a wide range of assays employed by universities, pharmaceutical companies, forensic laboratories and so on. Available in various formats and pack sizes, our multi-analyte Speciality and Research controls cover a range of specialised assays.

# SPECIALITY AND RESEARCH

## Speciality and Research Product Range

Product Description	Size	Cat. No.	Page No.
Antimicrobial Control II	3 x 1 ml	AMC5035	59
Antimicrobial Control III	3 x 1 ml	AMC5036	59
Growth Promoter Control	3 x 1 ml	GP5003	59
Adhesion Molecules Tri-Level Control	3 x 3 x 1 ml	EV3569	60
Adhesion Molecules Calibrator Series	9 x 1 ml	EV3568	60
Cerebral Array II Tri-Level Control	3 x 3 x 0.5 ml	CBB5009	60
Cytokine Array I Tri-Level Control	3 x 3 x 1 ml	CY5006	61
High Sensitivity Cytokine Array Tri-Level Control	3 x 3 x 2 ml	CY5005	61
Cytokine Array Calibrator Series	9 x 1 ml	EV3561	61
Cytokine Array III Tri-Level Control	3 x 3 x 1 ml	CY5012	61
Cytokine Array IV Tri-Level Control	3 x 3 x 1 ml	CY5011	62
Evidence Immunoassay Control	4 x 3 x 5 ml	EV3570	62
Synthetic Steroids Control	3 x 1 ml	EV3709	63
Synthetic Steroids Calibrator	9 x 1 ml	EV3708	63
Metabolic Syndrome Array I Control	3 x 3 x 1 ml	EV3757	63
Metabolic Syndrome Array I Calibrator	9 x 1 ml	EV3756	63
Metabolic Syndrome Array II Control	3 x 3 x 1 ml	EV3761	64
Metabolic Syndrome Array II Calibrator	9 x 1 ml	EV3760	64
Thyroid Total Calibrator Series	9 x 1 ml	EV3555	64
Thyroid Free Calibrator Series	9 x 1 ml	EV3563	64



Liquid  
ready-to-use



Liquid  
frozen



Lyophilised for  
enhanced stability



Assayed target  
values provided



100% human  
matrix

# SPECIALITY AND RESEARCH

## Antimicrobial Control II

Analytes			
Ceftiofur Quinolones (Generic)	Streptomycin Tetracyclines (Generic)	Thiamphenicol	Tylosin

A multi-analyte control supplied with values for 6 different antimicrobial agents used extensively in veterinary medicine.

- Lyophilised for enhanced stability
- Assayed values available for Randox Biochip systems
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 24 hours at 2°C to 8°C or 14 days at -20°C

Description	Size	Cat. No.
Antimicrobial Control II	3 x 1 ml	AMC5035

## Antimicrobial Control III

Analytes			
AHD AMOZ	AOZ	Chloramphenicol	Semicarbazine (SEM)

Multi-analyte control containing values for 5 different antimicrobial agents.

- Lyophilised for enhanced stability
- Assayed values available for Randox Biochip systems
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 28 days at 2°C to 8°C or 28 days at -20°C

Description	Size	Cat. No.
Antimicrobial Control III	3 x 1 ml	AMC5036

## Growth Promoter Control

Analytes			
$\beta$ -Agonists (Clenbuterol) Boldenone Corticosteroids	Nandrolone Ractopamine	Stanozolol Stilbenes	Trenbolone Zeranol

A multi-analyte control provided with accurately assigned target values and ranges for 9 different growth promoters.

- Lyophilised for enhanced stability
- Assayed values available for Randox Biochip systems
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 14 days at 2°C to 8°C

Description	Size	Cat. No.
Growth Promoter Control	3 x 1 ml	GP5003

## Adhesion Molecules Control and Calibrator

### Analytes

E-Selectin (E-SEL)  
Intercellular Adhesion Molecule-1 (ICAM-1)  
L-Selectin (L-SEL)

P-Selectin (P-SEL)  
Vascular Cell Adhesion Molecule-1 (VCAM-1)

A multi-analyte control with target values and ranges supplied for 5 different adhesion molecules.

- Lyophilised for enhanced stability
- Assayed values available for Randox Biochip systems
- 100% human recombinant material
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 24 hours at 2°C to 8°C or 7 days at -20°C

Description	Size	Cat. No.
Adhesion Molecules Tri-Level Control	3 x 3 x 1 ml	EV3569
Adhesion Molecules Calibrator Series	9 x 1 ml	EV3568

## Cerebral Array II Control

### Analytes

CRP  
D-dimer  
Neuron Specific Enolase (NSE)

Neutrophil Gelatinase-associated Lipocalin (NGAL)  
Soluble Tumour Necrosis Factor Receptor I (sTNFRI)  
Thrombomodulin (TM)

A multi-analyte control with target values and ranges provided for 6 analytes.

- Lyophilised for enhanced stability
- Assayed values available for Randox Biochip systems
- 100% human material
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 8 hours at 2°C to 8°C or 14 days at -80°C

Description	Size	Cat. No.
Cerebral Array II Tri-Level Control	3 x 3 x 0.5 ml	CBB5009

# SPECIALITY AND RESEARCH

## Cytokine Array I and High Sensitivity Cytokine Array I Controls and Calibrator



Analytes	
Epidermal Growth Factor (EGF) Interferon g (IFNg) Interleukin-1 $\alpha$ (IL-1 $\alpha$ ) Interleukin-1 $\beta$ (IL-1 $\beta$ ) Interleukin-2 (IL-2) Interleukin-4 (IL-4)	Interleukin-6 (IL-6) Interleukin-8 (IL-8) Interleukin-10 (IL-10) Monocyte Chemoattractant Protein-1 (MCP-1) Tumour Necrosis Factor $\alpha$ (TNF $\alpha$ ) Vascular Endothelial Growth Factor (VEGF)

Multi-analyte controls with target values and ranges provided for 12 different cytokines.

- Lyophilised for enhanced stability
- Assayed values available for Randox Biochip systems
- 100% human recombinant material
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 10-12 hours at 2°C to 8°C or 14 days at -20°C
- High sensitivity - Reconstituted stability of 4 hours at 2°C to 8°C or 7 days at -20°C

Description	Size	Cat. No.
Cytokine Array I Tri-Level Control	3 x 3 x 1 ml	CY5006
High Sensitivity Cytokine Array I Tri-Level Control	3 x 3 x 2 ml	CY5005
Cytokine Array Calibrator Series	9 x 1 ml	EV3561

## Cytokine Array III Control



Analytes	
GM-CSF Interleukin-5 (IL-5)	Interleukin-15 (IL-15) Macrophage Inflammatory Protein-1 $\alpha$ (MIP-1 $\alpha$ )

A multi-analyte control with target values and ranges provided for 4 analytes.

- Lyophilised for enhanced stability
- Assayed values available for Randox Biochip systems
- 100% human material
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 24 hours at 2°C to 8°C or 28 days at -20°C

Description	Size	Cat. No.
Cytokine Array III Tri-Level Control	3 x 3 x 1 ml	CY5012



## Cytokine Array IV Control

### Analytes

Matrix Metalloproteinase-9 (MMP-9)  
Soluble Interleukin-2-Receptor  $\alpha$  (sIL-2R $\alpha$ )  
Soluble Interleukin-6-Receptor (sIL-6R)

Soluble Tumour Necrosis Factor Receptor I (sTNFRI)  
Soluble Tumour Necrosis Factor Receptor II (sTNFRII)

A multi-analyte control with target values and ranges provided for 5 analytes.

- Lyophilised for enhanced stability
- Assayed values available for Randox Biochip systems
- 100% human material
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 7 days at 2°C to 8°C or 28 days at -20°C

Description	Size	Cat. No.
Cytokine Array IV Tri-Level Control	3 x 3 x 1 ml	CY5011

## Evidence Immunoassay Control

### Analytes

CEA  
FSH  
Luteinising Hormone (LH)  
Oestradiol

Progesterone  
Prolactin  
PSA (Free)  
PSA (Total)

T3 (Free)  
T3 (Total)  
T4 (Free)  
T4 (Total)

Testosterone  
TSH

Multi-analyte immunoassay control designed for use in the routine monitoring of the Randox Fertility, Thyroid and Tumour Marker Arrays.

- Lyophilised for enhanced stability
- Assayed values available for Randox Biochip systems
- 100% human serum
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 7 days at 2°C to 8°C or 28 days at -20°C

Description	Size	Cat. No.
Evidence Immunoassay Control	4 x 3 x 5 ml	EV3570

# SPECIALITY AND RESEARCH

## Synthetic Steroids Control and Calibrator

Analytes			
17 $\beta$ -Clostebol Ethinylestradiol	Gestagens (Generic)	Methandriol	Methyltestosterone

Human based control designed for use in the routine monitoring of both accuracy and precision. Assayed target values and ranges are provided for 5 different synthetic steroids.

- Lyophilised for enhanced stability
- Assayed values available for Randox Biochip systems
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 3 days at 2°C to 8°C or 14 days at -20°C

Description	Size	Cat. No.
Synthetic Steroids Control	3 x 1 ml	EV3709
Synthetic Steroids Calibrator	9 x 1 ml	EV3708

## Metabolic Syndrome Array I Control and Calibrator

Analytes			
C-Peptide Ferritin Insulin	Interleukin-1 $\alpha$ (1L-1 $\alpha$ ) Interleukin-6 (1L-6) Leptin	Plasminogen Activator Inhibitor-1 Resistin	Tumour Necrosis Factor $\alpha$ (TNF $\alpha$ )

A multi-analyte control with target values and ranges provided for 9 analytes associated with metabolic syndrome.

- Assayed values available for Randox Biochip systems
- 100% human material
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 72 hours at 2°C to 8°C and 7 days at -20°C

Description	Size	Cat. No.
Metabolic Syndrome Array I Control	3 x 3 x 1 ml	EV3757
Metabolic Syndrome Array I Calibrator	9 x 1 ml	EV3756

## Metabolic Syndrome Array II Control and Calibrator

Analytes		
Adiponectin	CRP	Cystatin C

A multi-analyte control with target values and ranges provided for 3 analytes associated with metabolic syndrome.

- Lyophilised for enhanced stability
- Assayed values available for Randox Biochip systems
- 100% human material
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 8 hours at 2°C to 8°C and 28 days at -20°C

Description	Size	Cat. No.
Metabolic Syndrome Array II Control	3 x 3 x 1 ml	EV3761
Metabolic Syndrome Array II Calibrator	9 x 1 ml	EV3760

## Thyroid Total Calibrator

Analytes		
T3 (Total)	T4 (Total)	TSH

A comprehensive multi analyte calibrator designed for use in the calibration of the Randox Thyroid Total Array on Randox Biochip systems.

- Lyophilised for enhanced stability
- Assayed values available for Randox Biochip systems
- 100% human material
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 7 days at 2°C to 8°C and 28 days at -20°C

Description	Size	Cat. No.
Thyroid Total Calibrator Series	9 x 1 ml	EV3555

## Thyroid Free Calibrator

Analytes		
T3 (Free)	T4 (Free)	TSH

A comprehensive multi analyte calibrator designed for use in the calibration of the Randox Thyroid Free Array on Randox Biochip systems.

- Lyophilised for enhanced stability
- Assayed values available for Randox Biochip systems
- 100% human material
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 7 days at 2°C to 8°C and 28 days at -20°C

Description	Size	Cat. No.
Thyroid Free Calibrator Series	9 x 1 ml	EV3563

# THERAPEUTIC DRUG CONTROLS

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Patients absorb and metabolise medication at different rates. As a result, it is simply not acceptable to administer a standard volume to each one. Due to the problems that over and under prescribing medication can cause, it is vital that levels are closely monitored and medical personnel can trust that the test results they receive are accurate and reliable. Our Therapeutic Drug Controls are manufactured from 100% human serum and have a reconstituted stability of 4 weeks, ensuring minimal waste, thus saving your laboratory money.

## Therapeutic Drug Product Range

Product Description	Size	Cat. No.	Page No.
Therapeutic Drug Control Level 1	20 x 5 ml	HD1667	67
Therapeutic Drug Control Level 2	20 x 5 ml	HD1668	67
Therapeutic Drug Control Level 3	20 x 5 ml	HD1669	67
Therapeutic Drug Calibrator	6 x 3 ml	TD3417	67



Liquid  
ready-to-use



Liquid  
frozen



Lyophilised for  
enhanced stability



Assayed target  
values provided



100% human  
matrix

# THERAPEUTIC DRUG

## Therapeutic Drug Control

Analytes			
Amikacin	Ethosuximide	Phenobarbitone	Tobramycin
Caffeine	Gentamicin	Phenytoin	Valproic Acid
Carbamazepine	Lithium	Primidone	Vancomycin
Cyclosporine	Methotrexate	Salicylate	
Digoxin	Paracetamol	Theophylline	

Multi-analyte therapeutic drug control covering 18 analytes at three clinically relevant levels. Method specific target values and ranges are supplied for this true third party control. With an extended reconstituted stability of 28 days, waste is kept to a minimum.

- Lyophilised for enhanced stability
- 100% human serum
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 28 days at 2°C to 8°C

Description	Size	Cat. No.
Therapeutic Drug Control Level 1	20 x 5 ml	HD1667
Therapeutic Drug Control Level 2	20 x 5 ml	HD1668
Therapeutic Drug Control Level 3	20 x 5 ml	HD1669

## Therapeutic Drug Calibrator

Analytes			
Carbamazepine	Phenobarbitone	Phenytoin	Valproic Acid
Digoxin			

The Acusera Therapeutic Drug calibrator has been designed for use in the calibration of 5 therapeutic drug assays on clinical chemistry analysers. An extended stability of 28 days will help to reduce waste and costs.

- Lyophilised for enhanced stability
- 100% human serum
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 28 days at 2°C to 8°C or 8 weeks at -20°C
- Multi-point calibrator

Description	Size	Cat. No.
Therapeutic Drug Calibrator	6 x 3 ml	TD3417

# TOXICOLOGY CONTROLS

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The detection and treatment of toxic substances can mean life or death for a patient. As a result, it is essential to ensure that the results you are releasing are accurate and reliable. Our controls are available in both liquid and lyophilised formats and in a variety of matrices, providing you with the flexibility to choose a control to suit your needs.

Toxicology Product Range			
Product Description	Size	Cat. No.	Page No.
Ethanol Calibrator/Control Set	4 x 10 ml	DA2703	70
Drugs of Abuse Array 1 Plus (Urine) Controls	4 x 2 x 1 ml	EV3745	70
Drugs of Abuse Array 1 Plus (Urine) Calibrators	9 x 1 ml	EV3744	70
Drugs of Abuse Array 1 Plus (Whole Blood) Controls	4 x 2 x 1 ml	EV3750	70
Drugs of Abuse Array 1 Plus (Whole Blood) Calibrators	9 x 1 ml	EV3749	70
Drugs of Abuse Array II (Urine) Controls	4 x 2 x 1 ml	EV3657	70
Drugs of Abuse Array II (Whole Blood) Controls	4 x 2 x 1 ml	EV3682	70
Drugs of Abuse Array II (Urine) Calibrator Series	9 x 1 ml	EV3656	70
Drugs of Abuse Array II (Whole Blood) Calibrator Series	9 x 1 ml	EV3687	70
Drugs of Abuse Array III (Urine) Control	4 x 2 x 1 ml	EV3830	71
Drugs of Abuse Array III (Urine) Calibrator Series	9 x 1 ml	EV3829	71
Drugs of Abuse Array III (Whole Blood) Control	4 x 2 x 1 ml	EV3794	71
Drugs of Abuse Array III (Whole Blood) Calibrator Series	9 x 1 ml	EV3797	71
Drugs of Abuse Array IV (Urine) Control	4 x 2 x 1 ml	EV3835	71
Drugs of Abuse Array IV (Urine) Calibrator Series	9 x 1 ml	EV3834	71
Drugs of Abuse Array IV (Whole Blood) Control	4 x 2 x 1 ml	EV3809	71
Drugs of Abuse Array IV (Whole Blood) Calibrator Series	9 x 1 ml	EV3808	71
Drugs of Abuse Array V (Urine) Control	4 x 2 x 1 ml	EV3814	72
Drugs of Abuse Array V (Urine) Calibrator Series	9 x 1 ml	EV3815	72
Drugs of Abuse Array V (Whole Blood) Control	4 x 2 x 1 ml	EV3848	72
Drugs of Abuse Array V (Whole Blood) Calibrator Series	9 x 1 ml	EV3847	72



Liquid  
ready-to-use



Liquid  
frozen



Lyophilised for  
enhanced stability



Assayed target  
values provided



100% human  
matrix



## Ethanol Calibrator/Control Set

Dedicated calibrator and control set designed for the calibration and quality control of the Randox Ethanol assay.

- Liquid ready-to-use
- Human urine
- Stable to expiry date when capped and stored at 2°C to 8°C
- Open vial stability of 28 days at 2°C to 8°C

Description	Size	Cat. No.
Ethanol Calibrator/Control Set	4 x 10 ml	DA2703

## Drugs of Abuse Array 1 Plus Controls and Calibrators

Analytes			
Amphetamine Barbiturates Benzodiazepine 1 Benzodiazepine 2	Benzoylcegonine (Cocaine) Buprenorphine Cannabinoids Creatinine	MDMA Methadone Methamphetamine	Opiates Phencyclidine Tricyclic Antidepressants

Assayed control for use in monitoring the accuracy and precision on Randox Biochip systems. Two levels of control are provided, covering the cut-off range.

- Lyophilised for enhanced stability
- Stable to expiry date at 2°C to 8°C
- Urine - Reconstituted stability of 14 days at 2°C to 8°C
- Whole Blood – Reconstituted stability of 7 days at 2°C to 8°C or 14 days at -20°C

Description	Size	Cat. No.
Drugs of Abuse Array 1 Plus (Urine) Controls	4 x 2 x 1 ml	EV3745
Drugs of Abuse Array 1 Plus (Urine) Calibrators	9 x 1 ml	EV3744
Drugs of Abuse Array 1 Plus (Whole Blood) Controls	4 x 2 x 1 ml	EV3750
Drugs of Abuse Array 1 Plus (Whole Blood) Calibrators	9 x 1 ml	EV3749

## Drugs of Abuse Array II Controls and Calibrators

Analytes			
Buprenorphine Creatinine Fentanyl	Ketamine LSD Methaqualone	MDMA Opiates Oxycodone I	Oxycodone II Propoxyphene

A comprehensive control designed for use in the routine monitoring of accuracy and precision on Randox Biochip systems. Assayed values are provided for 11 analytes.

- Lyophilised for enhanced stability
- Stable to expiry date at 2°C to 8°C
- Urine - Reconstituted stability of 7 days at 2°C to 8°C or 28 days at -20°C
- Whole Blood - Reconstituted stability of 7 days at 2°C to 8°C or 28 days at -20°C

Description	Size	Cat. No.
Drugs of Abuse Array II (Urine) Controls	4 x 2 x 1 ml	EV3657
Drugs of Abuse Array II (Whole Blood) Controls	4 x 2 x 1 ml	EV3682
Drugs of Abuse Array II (Urine) Calibrator Series	9 x 1 ml	EV3656
Drugs of Abuse Array II (Whole Blood) Calibrator Series	9 x 1 ml	EV3687

# TOXICOLOGY

## Drugs of Abuse Array III Controls and Calibrators

Analytes			
7-amino Flunitrazepam Chloral Hydrate Metabolite Creatinine	Ethyl Glucuronide Fentanyl Ketamine	Meperidine Meprobamate Zaleplon	Zolpidem Zopiclone

Assayed control for use in monitoring the accuracy and precision of the analytes above on Randox Biochip systems. Two levels of control are provided covering the cut-off range.

- Lyophilised for enhanced stability
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 7 days at 2°C to 8°C

Description	Size	Cat. No.
Drugs of Abuse Array III (Urine) Control	4 x 2 x 1 ml	EV3830
Drugs of Abuse Array III (Urine) Calibrator Series	9 x 1 ml	EV3829
Drugs of Abuse Array III (Whole Blood) Control	4 x 2 x 1 ml	EV3794
Drugs of Abuse Array III (Whole Blood) Calibrator Series	9 x 1 ml	EV3797

## Drugs of Abuse Array IV Controls and Calibrators

Analytes			
Creatinine Dextromethorphan Escitalopram Fluoxetine	Haloperidol Ibuprofen Methylphenidate Paracetamol	Salicylate Salicylic Acid Sertraline Tramadol	Trazodone Tricyclic Antidepressants

Assayed control for use in monitoring the accuracy and precision of the analytes above on Randox Biochip systems. Two levels of control are provided covering the cut-off range.

- Lyophilised for enhanced stability
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 7 days at 2°C to 8°C

Description	Size	Cat. No.
Drugs of Abuse Array IV (Urine) Control	4 x 2 x 1 ml	EV3835
Drugs of Abuse Array IV (Urine) Calibrator Series	9 x 1 ml	EV3834
Drugs of Abuse Array IV (Whole Blood) Control	4 x 2 x 1 ml	EV3809
Drugs of Abuse Array IV (Whole Blood) Calibrator Series	9 x 1 ml	EV3808

## Drugs of Abuse Array V Controls and Calibrators

Analytes			
Bath Salts 1 Bath Salts 2 Benzylpiperazines	Mescaline Phenylpiperazines Salvinorin	Synthetic Cannabinoids 1 Synthetic Cannabinoids 2 Synthetic Cannabinoids 3	Synthetic Cannabinoids 4

Assayed control for use in monitoring the accuracy and precision of the analytes above on Randox Biochip systems. Two levels of control are provided covering the cut-off range.

- Lyophilised for enhanced stability
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 7 days at 2°C to 8°C

Description	Size	Cat. No.
Drugs of Abuse Array V (Urine) Control	4 x 2 x 1 ml	EV3814
Drugs of Abuse Array V (Urine) Calibrator Series	9 x 1 ml	EV3815
Drugs of Abuse Array V (Whole Blood) Control	4 x 2 x 1 ml	EV3848
Drugs of Abuse Array V (Whole Blood) Calibrator Series	9 x 1 ml	EV3847

# URINE CONTROLS

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Our Acusera Urine Chemistry Controls are available in a choice of lyophilised and liquid ready-to-use formats, covering the full range of clinical testing. With flexible options available, we have a urine control to suit all laboratory sizes and budgets.

## Urine Product Range

Product Description	Size	Cat. No.	Page No.
Assayed Urine Control Level 2	12 x 10 ml	AU2352	75
Assayed Urine Control Level 3	12 x 10 ml	AU2353	75
Liquid Urine Control Level 2	10 x 10 ml	UC5074	75
Liquid Urine Control Level 3	10 x 10 ml	UC5075	75
Urinalysis Control Level 1	12 x 12 ml	UC5033	76
Urinalysis Control Level 2	12 x 12 ml	UC5034	76
Microalbumin Calibrator Series	6 x 2 ml	MA1567	76



Liquid  
ready-to-use



Liquid  
frozen



Lyophilised for  
enhanced stability



Assayed target  
values provided



100% human  
matrix

# URINE

## Assayed Urine Control

Analytes			
5-HIAA*	Creatinine	Microalbumin	Potassium
Amylase	Dopamine*	Norepinephrine*	Protein (Total)
Calcium	Epinephrine*	Normetanephrine	Sodium
Chloride	Glucose	Osmolality	Urea
Copper*	Magnesium	Oxalate*	Uric Acid (Urate)
Cortisol	Metanephrine	Phosphate (Inorganic)	Vanillylmandelic Acid (VMA)*

Comprising 24 urine chemistry analytes in a single multi-analyte control, the Acusera Assayed Urine Control is designed to cover your complete test menu, reducing costs and preparation time. Our unique 100% human urine matrix will mirror the performance of patient samples and ensure target values don't shift after changing reagent batch. Assayed target values and ranges are provided for this true third party control.

- Lyophilised for enhanced stability
- 100% human urine
- Stable to expiry date at 2°C to 8°C
- Reconstituted stability of 5 days at 2°C to 8°C or 14 days at -20°C

Description	Size	Cat. No.	
Assayed Urine Control Level 2	12 x 10 ml	AU2352	
Assayed Urine Control Level 3	12 x 10 ml	AU2353	*No claims are made regarding stability.

## Liquid Urine Control

Analytes			
Amylase	Glucose	pH	Specific Gravity
Calcium	hCG	Phosphate (Inorganic)	Urea
Chloride	Magnesium	Potassium	Uric Acid (Urate)
Cortisol	Microalbumin	Protein (Total)	
Creatinine	Osmolality	Sodium	

Our Acusera Liquid Urine Control has been designed to consolidate up to 18 commonly used urine chemistry analytes in a single vial, reducing the number of controls required to cover your complete test menu. Supplied in a user-friendly liquid ready-to-use format with an open vial stability of 30 days, waste and time is kept to a minimum. Assayed target values and ranges are provided for this true third party control.

- Liquid ready-to-use
- 100% human urine
- Stable to expiry date at 2°C to 8°C
- Open vial stability 30 days at 2°C to 8°C
- Multi-point calibrator

Description	Size	Cat. No.
Liquid Urine Control Level 2	10 x 10 ml	UC5074
Liquid Urine Control Level 3	10 x 10 ml	UC5075

## Urinalysis Control

Analytes				
Albumin	Glucose	Nitrite	Urobilinogen	
Bilirubin	hCG	pH		
Blood	Ketones	Protein (Total)		
Creatinine	Leukocytes	Specific Gravity		

The Acusera Urinalysis Control has been specifically designed for use in the quality control of urine test strips. Our user-friendly liquid ready-to-use format will dramatically reduce preparation time while a stability of 30 days will keep waste to a minimum. Assayed values are provided for 13 analytes covering a range of test strip manufacturers.

- Liquid ready-to-use
- 100% human urine
- Suitable for use in POCT
- Stable to expiry date at 2°C to 8°C
- Open vial stability of 30 days or 20 immersions at 2°C to 25°C

Description	Size	Cat. No.
Urinalysis Control Level 1	12 x 12 ml	UC5033
Urinalysis Control Level 2	12 x 12 ml	UC5034

## Microalbumin Calibrator

Our Acusera Microalbumin Calibrator have been developed for use in the calibration and monitoring of microalbumin immunoturbidimetric assays. Our unique 100% human urine matrix ensures it behaves like a patient sample and reduces costly shifts when reagent batch is changed. As a true third party calibrator, it is compatible for use on a wide range of clinical analysers.

- Liquid ready-to-use
- 100% human urine
- Stable to expiry date at 2°C to 8°C
- Once opened stable to expiry date at 2°C to 8°C

Description	Size	Cat. No.
Microalbumin Calibrator Series	6 x 2 ml	MA1567

# CUSTOMISED QUALITY CONTROL SERA

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Don't see what you are looking for? No problem! Randox Quality Control can work with you to develop a customised quality control for your laboratory. With our custom sera, you can select the analytes, levels, format and vial size required by your laboratory, ensuring the final product meets all your needs and guarantees you can continue to produce accurate and reliable patient results.



# CUSTOMISED QUALITY CONTROL SERA

For over 40 years, laboratories, EQA scheme organisers and other diagnostic companies have looked to Randox to provide their QC needs. Randox Laboratories manufactures a full portfolio of quality controls, calibrators and standards for over 400 analytes. In addition to 'off the shelf' quality control products, Randox is the world's leading provider of customised control materials. Customising control materials can involve adding/removing analytes, specifying concentrations or choosing alternative vial sizes.

## Our principal control products are:

- Antioxidants
- Cardiac Markers
- Clinical Chemistry
- Coagulation and Haematology
- Diabetes and Whole Blood
- Immunoassay
- Immunology/Proteins
- Infectious Disease (Serology)
- Lipids
- Tumour Markers
- Therapeutic Drugs and Toxicology
- Urine Chemistry
- Specialist and Research controls such as Cytokines, Growth Promoters, Antimicrobials, Cerebral Markers and a variety of single-analyte control products

Randox also produces custom sera for EQA schemes and specialised controls for research projects.

Quality is our focus during the manufacturing process, as all control products are produced to the same high specifications using procedures complying with ISO 13485 for medical devices. State of the art clinical chemistry and immunoassay analysers are used during the manufacturing and quality control processes.

To enable us to identify and fulfil your needs, please discuss your requirements with your Randox representative. We are happy to consider any requirements you may have.

## Consolidation

Randox will **significantly consolidate your existing controls**. An average laboratory may rationalise from 7 individual controls to a single control product

## Tailor Made

**Specify the analytes and levels** you require. We can provide the levels tailored to your cut off values

## Stability

Randox lyophilised controls are **stable for up to 4 years, reducing costly lot changes** and enabling use of the same lot over an extended period

## Options

**Customised controls are available in different matrices** e.g. serum, urine, aqueous

## Flexibility

Batch sizes manufactured between **50 – 250,000 vials**. Randox can provide a wide range of **vial sizes from 1 ml to 10 ml**

## Quality

All controls are **produced to high quality specification**, fully compliant with ISO 13485

## Choice

**3 different formats** – lyophilised/liquid/liquid frozen

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Approximately 70% of clinical decisions are based on laboratory test results. Poor laboratory quality can result in unreliable test results, ultimately leading to misdiagnosis, inappropriate treatment and may even be potentially life threatening to your patient. Availability of comprehensive controls covering the full spectrum of laboratory tests is critical in order to assure quality of testing.



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- Urine Controls ■

		#
		5-HIAA
		7-amino flunitrazepam
		17-OH-progesterone
		17 $\beta$ Clostebol
		1-25-(OH) <sub>2</sub> -Vitamin D
		25-OH-Vitamin D
		$\alpha$ -1-Acid Glycoprotein
		$\alpha$ -1-Antitrypsin
	x	$\alpha$ -1-Globulin (Electrophoresis)
	x	$\alpha$ -2-Globulin (Electrophoresis)
		$\alpha$ -2-Macroglobulin
		$\alpha$ -Fetoprotein (AFP)
		$\alpha$ -HBDH
		ACE (Angiotensin Converting Enzyme)
		Acetaminophen
		Acid Phosphatase (Non-Prostatic)
		Acid Phosphatase (Prostatic)
		Acid Phosphatase (Total)
		ACTH
		Activated Partial Thromboplastin Time (APTT)
		AHD
		Albumin
	x	Albumin (Electrophoresis)
	x	Aldolase
		Aldosterone
		Alkaline Phosphatase (ALP)
		ALT (GPT)
		AMH
		Amikacin
		Ammonia
		AMOZ
		Amphetamine
		Amylase
		Amylase (Pancreatic)
		Androstenedione
		Anti-HAV
		Anti-HBc
		Anti-HBe
		Anti-HBs
		Anti-HCV
		Anti-HIV 1 / 2
		Anti-HTLV 1 / 2
		Anti-SARS-CoV-2
		Anti-SARS-CoV-2 Spike
		Anti-Streptolysin (ASO)
		Anti-Thyroglobulin (Anti-TG)
		Anti-Thyroxine (Anti-TPO)
		Anti-Thrombin III (AT III)
		AOZ
		Apolipoprotein A-I
		Apolipoprotein A-II
		Apolipoprotein B
		Apolipoprotein C-II
		Apolipoprotein C-III
		Apolipoprotein E
		AST (GOT)













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Control Type	Control Name	Page	Category			
Immunology/Protein Controls	Haematocrit (HCT)	H	Immunology/Protein Controls			
	Haemoglobin (HGB)					
	Haemoglobin A2 (HbA2)					
	Haemoglobin F (HbF)					
	Haemoglobin S (HbS)					
	Haemoglobin (Total)					
	Haemolysis (H)					
	Haemopoietic Progenitor Cell (HPC)					
	Haloperidol					
	Haptoglobin					
	HAV IgM					
	HbA1c					
	HBc IgM					
	HBsAg					
	HBsAg					
	hCG					
	Free $\beta$ -hCG					
	Total $\beta$ -hCG					
	HDL-3					
	<i>Helicobacter pylori</i> IgG					
	Herpes Simplex Virus 1 (HSV-1) IgG					
	Herpes Simplex Virus 1 (HSV-1) IgM					
	Herpes Simplex Virus 2 (HSV-2) IgG					
	Herpes Simplex Virus 2 (HSV-2) IgM					
	HIV-1 P24Ag					
	Homocysteine					
	Infectious Disease Controls (Serology)			Ibuprofen	I	Infectious Disease Controls (Serology)
				Icterus (I)		
				IMIDC		
				IMIRF		
				Immature Granulocytes (IG)		
				% Immature Granulocytes (% IG)		
Immature Myeloid Information (IMI)						
Immature Platelet Fraction (IPF)						
Immunoglobulin A (IgA)						
High Sensitivity Immunoglobulin A (hslgA)						
Immunoglobulin E (IgE)						
Immunoglobulin G (IgG)						
High Sensitivity Immunoglobulin G (hslgG)						
Immunoglobulin M (IgM)						
High Sensitivity Immunoglobulin M (hslgM)						
Inhibin A						
Insulin						
Insulin Like Growth Factor-1 (IGF-I)						
Intercellular Adhesion Molecule-1 (ICAM-1)						
Interferon- $\gamma$ (IFN- $\gamma$ )						
Interleukin-1 $\alpha$ (IL-1 $\alpha$ )						
Interleukin-1 $\beta$ (IL-1 $\beta$ )						
Interleukin-2 (IL-2)						
Interleukin-4 (IL-4)						
Interleukin-5 (IL-5)						
Interleukin-6 (IL-6)						
Interleukin-8 (IL-8)						
Interleukin-10 (IL-10)						
Interleukin-15 (IL-15)						
Lipid Controls	Lipid Control		Lipid Controls			
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Toxicology Controls	Assayed Urine Control		Toxicology Controls			
	Liquid Urine Control					
	Urinalysis Control					
	Microalbumin Calibrator					
	Haemoglobin (Total)					
	Haemolysis (H)					
Urine Controls	Assayed Urine Control		Urine Controls			
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	Glutathione Peroxidase (Ransel) Control and Calibrator	Glutathione Reductase Control and Calibrator	Superoxide Dismutase (Ransod) Control	Total Antioxidant Status Control	Blood Gas Control	Cardiac Control	Tri-Level Cardiac Control	Troponin T Control	CK-MB Control and Calibrator	Precision Chemistry Premium Plus Control	Liquid Chemistry Premium Plus Control	Liquid Chemistry Premium Plus Control	Liquid Assayed Chemistry Premium Plus Control	Bovine Chemistry Assayed Control	Clinical Chemistry Calibrator Serum	Ammonia Ethanol Control	Aldolase Control and Calibrator	Liquid Bilirubin Control	Bilirubin Elevated Serum	Glycerol Control	Multi Control and Calibrator	Glutamine Control and Calibrator	Serum Indices Control	Coagulation Control	Haematology Control	HbA1c Control and Calibrator Series	Liquid HbA1c Control	G-6-PDH Control	Fructosamine Control and Calibrator	Anti-Müllerian Hormone (AMH) Control	Liquid Immunoassay Premium Control	PTH Control	Immunoassay Premium Control	Immunoassay Premium Plus Control	Immunoassay Speciality I Control	Immunoassay Speciality II Control	Tumour Marker Control	Maternal Screening Control	Specific Protein Control	Specific Protein Calibrator					
T	TSH								x	x		x																																	
	Tumour Necrosis Factor $\alpha$ (TNF $\alpha$ )																																												
	Tylosin																																												
U	Unconjugated Estriol																																												
	Urea								x	x	x	x	x	x	x																														
	Uric Acid (Urate)								x	x	x	x	x	x	x																														
	Urobilinogen																																												
V	Valproic Acid								x	x		x																																	
	Vancomycin								x	x		x																																	
	Vanillylmandelic Acid (VMA)																																												
	Varicella Zoster Virus (VZV) IgG																																												
	Vascular Cell Adhesion Molecule-1 (VCAM-1)																																												
	Vascular Endothelial Growth Factor (VEGF)																																												
	Vitamin B <sub>12</sub>								x	x	x	x	x																																
W	White Blood Cells (WBC)																								x																				
	White Blood Cells Differential (WBC-D)																								x																				
Z	Zaleplon																																												
	Zeronal																																												
	Zinc								x	x	x	x	x	x	x																														
	Zolpidem																																												
	Zopiclone																																												



# RANDOX QC PORTFOLIO

Our expertise in Quality Control have led to us creating market leading products that are tried and trusted by laboratory professionals. Our product portfolio offers high quality diagnostic solutions which offer reliable and rapid diagnosis and we believe that by providing laboratories with these tools, we can improve health worldwide.



## ACUSERA 24•7 - Online QC software with real-time peer group statistics

Designed for use with the Acusera range of third party controls, the Acusera 24•7 software will help you monitor and interpret your QC data. Access to an impressive range of features, including interactive charts, the automatic calculation of Measurement Uncertainty & Sigma Metrics and live peer group data generated from our extensive database of laboratory participants, ensures Acusera 24•7 is the most comprehensive package available.



## RIQAS - Randox international quality assessment scheme

The largest international EQA scheme, used by more than 55,000 laboratory participants in over 134 countries worldwide. Comprising over 360 routine and esoteric parameters in 39 comprehensive and flexible EQA programmes, RIQAS is designed to cover all areas of clinical testing. Each programme benefits from a wide range of concentrations, frequent reporting and informative yet user-friendly reports.



## ACUSERA VERIFY - Keep your instrument in check with calibration verification materials

Designed to challenge a larger section of an instruments reportable range and test if a system's calibration is still valid. Our linearity materials cover a wide range of testing including, CRP, RF, Lipids, Therapeutic Drugs, Esoterics and more. Designed with user convenience in mind, all our linearity sets are supplied in a liquid format and in varying levels. Our unique combination of analytes enables laboratories to reduce the number of individual products required while ultimately reducing costs and time.



## MOLECULAR - IQC & EQA solutions for infectious disease testing

Our complete quality control solutions for molecular infectious disease testing comprise hundreds of characterised viral, bacterial and fungal targets. Covering a wide range of transplant associated diseases, respiratory infections, blood borne viruses, sexually transmitted infections and more, our Molecular IQC and EQA range covers the full laboratory portfolio. Both our product offering are manufactured using only the highest quality material and the availability of whole pathogen samples ensures the performance of the patient sample is mimicked throughout.

Contact us for more information on any of our products and services:

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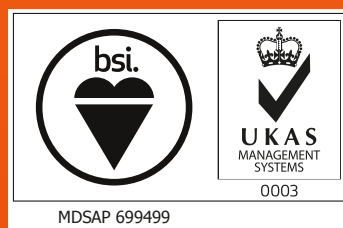
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