

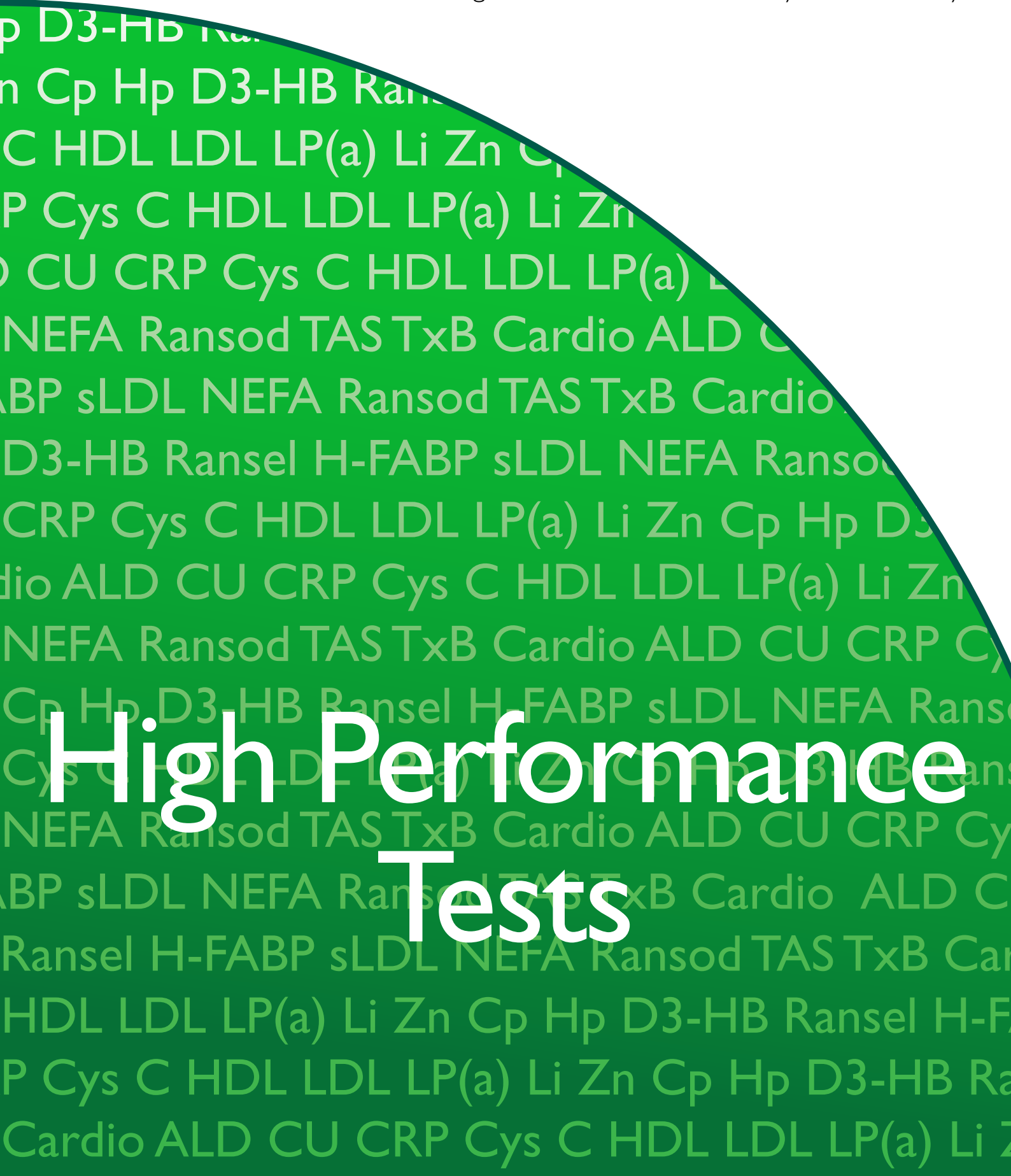


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RANDOX

High Performance & Unique Tests

Designed to meet the needs of your laboratory



High Performance Tests

High Performance & Unique Tests

Randox is a primary manufacturer of a wide range of unique tests designed to meet the equally unique needs of your laboratory.

Our extensive range of diagnostic reagents are recognised internationally as being of the highest quality; producing accurate and precise results.

Our complete product portfolio covers over 100 disease markers including reagents for a wide range of routine chemistries, specific proteins, lipids, therapeutic drugs, drugs of abuse, antioxidants, coagulation, diabetes, food and wine and veterinary parameters.

A wide range of formats and methods are available providing greater flexibility and choice. In addition to flexible pack sizes and a comprehensive list of analyser applications, we can also provide dedicated reagent packs for the Dimension, Hitachi and Synchron range of chemistry analysers. This provides you with freedom of choice from an independent manufacturer.

At Randox, we re-invest significantly into research and development to ensure we provide the latest innovations. As a result we offer a comprehensive range of unique tests.

Benefits of Randox Reagents

Randox offer the largest range of chemistries

- Reducing the need to source products from multiple suppliers
- Ensures confidence in reagents as all raw materials are sourced by a manufacturer with a quality centric approach

Liquid ready to use reagents available

- Ensuring ease of use within the laboratory, increasing productivity and enabling faster turnaround times

Automated applications for a wide range of clinical analysers

- Fully validated applications ensures confidence in testing
- Increased flexibility and choice from an independent manufacturer
- Easy Fit bottles from Randox for use with multiple machines ensure that there is no need for additional steps

Excellent correlation to reference methods

- Proof of quality and commitment to providing the best reagents in the market

Wide measuring ranges

- Ensures all results can be covered by one single reagent
- Reduces the costs of purchasing different reagents with different measuring ranges

High Performance Tests

Aldolase

Cat. No: AD189 5 x 20ml

Aldolase is an enzyme which converts glucose to energy and can be found throughout the body, however levels are particularly high in muscle tissue. Aldolase levels are elevated in cases of muscle, liver and cardiac damage.

Key Features

- Wide measuring range: 1.85 - 103 U/l
- Excellent sensitivity: 1.85 U/l
- Intra-assay precision 2.01% at 7.03 μ /l and 1.67% at 15.9 μ /l
- Inter-assay precision 2.88% at 7.09 μ /l and 3.59% at 14.7 μ /l
- Working reagent stable for eight hours at 2 - 8°C

Copper

Cat. No: CU2340 5 x 20ml

Copper is an essential trace element in human nutrition and a component of many metalloenzymes. Copper is important to the function of ceruloplasmin and for the synthesis of melanin and collagen. Copper deficiency is characterised by growth failure and hypo chromic microcytic anaemia; acute copper toxicity can cause gastroenteritis and severe renal failure.

Key Features

- Wide measuring range: 1.3 - 97 μ mol/l
- Excellent sensitivity: 1.3 μ mol/l
- Intra-assay precision 5.72% at 5.75 μ mol/l and 0.53% at 77.1 μ mol/l
- Inter-assay precision 3.12% at 6.45 μ mol/l and 1.15% at 78.9 μ mol/l
- Lyophilised reagents stable to expiry when stored at 2 - 8°C
- Excellent correlation, with a co-efficient of 0.99 obtained

Cystatin C

Cat. No: CYS4004 R1 2 x 17.6 ml, R2 2 x 6.1 ml

Cystatin C is freely filtered by the glomerular membrane making blood levels a good indicator of GFR function. Several studies have even documented Cystatin C as a superior marker of GFR function compared to creatinine. Unlike creatinine, Cystatin C does not have a 'blind area' meaning it is extremely sensitive to very small changes in GFR and therefore capable of detecting early reductions in GFR.

Key Features

- Wide measuring range: 0.4 – 10 mg/l
- Excellent sensitivity: 0.4 mg/l
- Intra-assay precision 4.2% at 0.78 mg/l and 2.6% at 5.35 mg/l
- Total precision 6.2% at 0.78 mg/dl and 4.4% at 5.35 mg/dl
- Liquid ready-to-use reagents stable to expiry when stored at 2 - 8°C
- No need to measure urine to get a true Glomerular Filtration Rate

Direct HDL Cholesterol

Cat. No: CHI383 R1 3 x 2.5 L, R2 1 x 2.5 L
 CH2652 R1 6 x 30 ml, R2 3 x 20 ml
 CH2655 R1 6 x 78 ml, R2 3 x 52 ml
 CH2664* R1 5 x 252 ml
 CH2665* R2 3 x 150 ml
 CH2849 240 Tests (Dimension)
 CH2861 240 Tests (Dimension AHDL)
 CH3811 R1 3 x 51 ml, R2 3 x 20 ml
 CH5730 540 Tests
 CH9701 R1 6 x 20 ml, R2 2 x 20 ml
 CH8033 R1 4 x 38.2 ml, R2 4 x 15.2 ml

*These kits must be purchased together

High-density lipoproteins (HDL) are one of the major classes of plasma lipoproteins. High levels of HDL cholesterol in the blood can lower an individual's risk of developing heart disease.

Key Features

- Wide measuring range 0.189 – 3.73 mmol/l
- Excellent sensitivity: 0.189 mmol/l
- Intra-assay precision 1.66% at 0.814 mmol/l and 1.34% at 1.81 mmol/l
- Inter-assay precision 2.74% at 0.792 mmol/l and 2.51% at 1.76 mmol/l
- Liquid ready-to-use reagents stable to expiry when stored at 2 - 8°C
- The Randox direct clearance method completely removes all non-HDL components from the sample resulting in a high degree of accuracy even with abnormal samples
- Bilirubin and Triglyceride interference is reduced

Direct LDL Cholesterol

Cat. No: CHI384 R1 3 x 2.5 L, R2 1 x 2.5 L
 CH2656 R1 6 x 78 ml, R2 3 x 52 ml
 CH2657 R1 6 x 30 ml, R2 3 x 20 ml
 CH2850 160 Tests (Dimension)
 CH3841 R1 3 x 51 ml, R2 3 x 20 ml
 CH5731 540 Tests (Synchron)
 CH9702 R1 6 x 20 ml, R2 2 x 20 ml
 CH8032 R1 4 x 19.2 ml, R2 4 x 8.2 ml

Accurate measurement of **LDL Cholesterol** is of vital importance in therapies which focus on lipid reduction to prevent or reduce the progress of atherosclerosis and to avoid plaque rupture.

Key Features

- Wide measuring range: 0.189 – 22.2 mmol/l
- Excellent sensitivity: 0.189 mmol/l
- Intra-assay precision 2.50% at 1.17 mmol/l and 1.80% at 4.95 mmol/l
- Inter-assay precision 3.82% at 2.51 mmol/l and 3.33% at 4.91 mmol/l
- Liquid ready-to-use reagents stable to expiry when stored at 2 - 8°C
- All non LDL components are removed in the first step of the reaction enabling accurate and reliable measurement of LDL Cholesterol even in the presence of abnormal samples
- Bilirubin and Triglyceride interference is reduced
- Overcomes problems of patient misclassification using Friedewald Formula $LDL = Total\ Cholesterol - HDL - Trig / 5.0$ (mg/dl)

Fructosamine

Cat. No: FR3133 R1 5 x 25 ml, R2 5 x 6.2 ml
 FR4030 R1 4 x 19.8 ml, R2 4 x 6.9 ml
 FR8114 R1 4 x 19.8 ml, R2 4 x 6.9 ml

Increased serum **fructosamine** levels are observed in diabetic patients with elevated blood glucose. Diabetes related complications may be reduced by long-term monitoring and control of blood glucose levels. Fructosamine is a useful medium term indicator whereas measurement of blood glucose is a short term indicator. Randox fructosamine is a specific enzymatic method for the direct determination in serum or plasma. The American Diabetes Association (ADA) regards fructosamine to be a useful tool in monitoring diabetes control.

Key Features

- Wide measuring range: 8.12 - 1803 µmol/l
- Excellent sensitivity: 8.12 µmol/l
- Intra-assay precision 2.6% at 138 µmol/l and 0.7% at 411 µmol/l
- Total precision 2.9% at 138 µmol/l and 1.6% at 411 µmol/l
- Liquid ready-to-use reagents stable to expiry date at 2 - 8°C
- Offers improved specificity and reliability compared to conventional NBT-based methods. This method does not suffer from non-specific interferences unlike existing methods which can also be time consuming and difficult to automate

Full Range CRP

Cat. No:	CP3847	RI 2 x 11 ml, R2 2 x 11 ml
	CP3849	RI 4 x 50 ml, R2 4 x 50 ml
	CP3850	RI 5 x 100 ml, R2 5 x 100 ml
	CP8028	RI 2 x 13 ml, R2 2 x 13 ml
	CP3826	RI 6 x 20 ml, R2 3 x 9 ml

C-reactive protein (CRP) is an acute phase reactant providing a highly sensitive indicator of inflammatory conditions, infections and other disease states where tissue necrosis occurs. Measurements are useful in the detection of infection, tissue injury, inflammatory disorders and associated diseases such as inflammatory bowel disease and rheumatic diseases. Low level CRP is now routinely measured in cardiac risk stratification.

Key Features

- Wide measuring range: 0.3 - 161 mg/l
- Excellent sensitivity: 0.3 mg/l
- Intra-assay precision 2.78% at 1.07 mg/l and 1.03% at 150 mg/l
- Inter-assay precision 5.47% at 1.08 mg/l and 1.72% at 151 mg/l
- Liquid ready-to-use reagents stable to expiry when stored at 2 - 8°C
- Wide measuring range allows you to accurately measure CRP both above and below the normal range using a single kit

Lipoprotein (a)

Cat. No:	LP2757	RI 1 x 30 ml, R2 1 x 15 ml
	LP2878	160 tests (Dimension)
	LP3403	RI 1 x 10 ml, R2 1 x 6 ml

Lipoprotein (a) in combination with other lipid tests can provide clinicians with much needed additional information on an individual's risk of developing atherosclerotic disorders including myocardial and cerebral infarction. It is of particular use in assessing the risk of coronary heart disease in specific populations as Lp (a) concentrations are genetically determined and vary with ethnic population.

Key Features

- Wide measuring range: 3 - 90 mg/dl
- Excellent sensitivity: 3 mg/dl
- Intra-assay precision 2.3% at 19.9 mg/dl and 1.72% at 59.1 mg/dl
- Inter-assay precision 6.09% at 22.8 mg/dl and 2.99% at 57.7 mg/dl
- Liquid ready-to-use reagents stable to expiry when stored at 2 - 8°C
- Research has shown the Randox method to exhibit minimum size related bias
- The Randox assay contains a very high density of isoform insensitive antibodies and detection reagent – ensuring more Lp(a) bound antibodies are detected and a more accurate measurement is obtained

Lithium

Cat. No:	LM4005	RI 2 x 18.3 ml, R2 2 x 6.5 ml
	LM8053	RI 2 x 18.3 ml, R2 2 x 6.5 ml

Lithium carbonate is frequently used in the treatment of Bipolar Disorders as a mood stabiliser. There is a narrow margin between lithium's therapeutic and toxic ranges. Serum lithium levels are monitored to avoid toxicity, optimise the therapeutic effect and ensure compliance.

Key Features

- Wide measuring range: 0.259 - 2.99 mmol/l
- Excellent sensitivity: 0.259 mmol/l
- Intra-assay precision 4.0% at 0.52 mmol/l and 1.0% at 1.97 mmol/l
- Inter-assay precision 5.0% at 0.52 mmol/l and 2.5% at 1.97 mmol/l
- Liquid ready-to-use reagents stable to expiry when stored at 2 - 8°C
- Traceable to NIST reference material

Zinc

Cat. No:	ZN2341	RI 6 x 50 ml
	ZN2607	6 x 50 ml

Zinc is an essential trace metal, which is second only to Iron. It is required for growth, development of bones, metabolism and wound healing. Zinc deficiency is most often the result of low dietary intake and is implicated in several disease states including liver disease, kidney disease, diabetes, malignancy and malabsorption syndrome.

Key Features

- Wide measuring range: 3 – 153 µmol/l
- Excellent sensitivity: 3 µmol/l
- Intra-assay precision 6.91% at 4.46 Tmol/l and 0.87% at 136 Tmol/l
- Inter-assay precision 4.95% at 4.43 Tmol/l and 1.44% at 135 Tmol/l
- Liquid ready-to-use reagents stable to expiry date at 15 - 25°C

Ceruloplasmin

Cat. No: CPL4017 RI 2 x 13.4 ml, R2 2 x 4.8 ml

Ceruloplasmin plasma levels rise as much as three times the reference limit in response to infection and inflammation. High levels are noted in Hodgkin's disease, leukaemia and rheumatoid arthritis. The main use of ceruloplasmin is in the diagnosis of Wilson's disease.

Key Features

- Wide measuring range: 6.29 – 73.8 mg/dl
- Excellent sensitivity: 6.29 mg/dl
- Liquid ready-to-use reagents stable up to expiry when stored at 2 - 8°C
- Intra-assay precision 5.82% at 15.6 mg/dl and 2.51% at 55.0 mg/dl
- Total precision 7.81% at 15.6 mg/dl and 4.34% at 55.0 mg/dl

Haptoglobin

Cat. No: HP3886 RI 1 x 12 ml, R2 2 x 2.75 ml

Haptoglobin is an acute phase protein made primarily in the liver. Its main function is to bind free haemoglobin and remove it from circulation thus preventing renal injury and loss of iron following haemolysis. Haptoglobin is also thought to have both anti-inflammatory and antioxidant properties. Haptoglobin measurements are used in the diagnosis of haemolytic anaemia and to distinguish it from other types of anaemia.

Key Features

- Wide measuring range 0.13 g/l – 3.68 g/l
- Excellent sensitivity: 0.13 g/l
- Intra-assay precision 4.54% at 0.63 g/l and 2.77% at 1.90 g/l
- Total precision 7.81% at 0.63 g/l and 6.23% at 1.90 g/l
- Liquid ready-to-use reagents stable to expiry when stored at 2 - 8°C
- Onboard reagent stability of 28 days. Calibration is only required every seven days

Paracetamol

Cat. No: ACE4023 RI 2 x 11 ml, R2 2 x 6.5 ml

Paracetamol is a popular painkiller available without prescription. Serum levels of this painkiller are not commonly monitored at therapeutic doses; however because the drug is sold separately or in combination with other compounds it is frequently associated with overdose and predicts the risk of liver damage due to toxicity. An overdose can lead to severe jaundice, liver/kidney failure or death so early detection is essential.

Key Features

- Wide measuring range: 4.89 – 652 mg/l
- Excellent sensitivity: 4.89 mg/l
- Liquid ready-to-use reagents stable to expiry when stored at 2 - 8°C
- Intra-assay precision 4.52% at 15.2 mg/l and 1.07% at 419 mg/l
- Total precision 6.92% at 15.2 mg/l and 3.91% at 419 mg/l
- Seven day calibration frequency

Salicylate (Aspirin)

Cat. No: SAL4024 RI 2 x 11 ml, R2 2 x 3.8 ml

Aspirin is commonly used for its pain killing and anti-inflammatory properties. Used to treat rheumatic fever, rheumatic arthritis and other inflammatory joint conditions, it is also given to individuals at risk of myocardial infarction. Overdose of salicylate results in disturbances of the central nervous system and gastrointestinal tract and even renal failure.

Key Features

- Wide measuring range: 24.8 - 1079 mg/L
- Excellent sensitivity: 24.8 mg/L
- Liquid ready-to-use reagents, stable to expiry when stored at 2 - 8°C
- Intra-assay precision 5.05% at 38.7 mg/l and 1.08% at 406 mg/dl
- Total precision 6.83% at 38.7 mg/dl and 2.48% at 406 mg/dl
- Seven day calibration frequency

D-3-Hydroxybutyrate (Ranbut)

Cat. No: **RBI007** 10 x 10 ml
RBI008 10 x 50 ml

Measures **D-3-Hydroxybutyrate** for the detection of ketosis in several conditions – diabetes, hypoglycaemia, epilepsy and severe injury and illness. D-3-Hydroxybutyrate is the major ketone body in the blood and the most stable (seven days at +4°C). During ketosis, D-3-Hydroxybutyrate levels increase more than levels of acetone and acetoacetate, making D-3-Hydroxybutyrate a more sensitive marker of ketosis.

Key Features

- Wide measuring range: 0.07 – 2.9 mmol/l
- Excellent sensitivity – detects changes in concentration as low as 0.07 mmol/l
- Intra-assay precision 2.87% at 0.32 mmol/l and 0.54% at 2.41 mmol/l
- Inter-assay precision 3.22% at 0.33 mmol/l and 0.92% at 2.45 mmol/l
- Measurement in serum eliminates risk of false negatives

Glutathione Peroxidase (Ransel)

Cat. No: **RS504** 8 x 6.5 ml
RS505 8 x 10 ml

At normal concentrations, selenium has a protective effect against several disease states, however, this protection is lost at lower concentrations and selenium can be toxic at high concentrations. It is therefore important to monitor selenium levels to ensure they are kept within normal range. **Ransel (Glutathione Peroxidase)** measures glutathione peroxidase which has a direct correlation with selenium levels.

Key Features

- Wide measuring range: 82.86 - 900 U/l
- Excellent sensitivity: 82.86 U/l
- Working reagent stable for 48 hours at +4 - 8°C or eight hours at +15 - 25°C
- Intra-assay precision 4.2% at 97.14 U/l and 3.7% at 397 U/l
- Total precision 7.5% at 97.14 U/l and 4.2% at 397 U/l

H-FABP

Cat. No: **FB4025** R1 1 x 19 ml, R2 1 x 7 ml

Heart-type Fatty Acid Binding Protein (H-FABP) is a low molecular-weight (15kD) cytoplasmic protein that is involved in the intracellular uptake and buffering of free fatty acids in the myocardium. The combination of its low molecular weight and cytoplasmic location enables H-FABP to be a highly sensitive early marker of acute coronary syndrome, detectable as early as 30 minutes following the onset of an ischemic episode. Although H-FABP has similar release kinetics to Myoglobin, it is approximately 15 - 20 times more cardiac specific, making it a more effective marker of myocardial injury.

Key Features

- Liquid ready-to-use reagents stable to expiry when stored at +2 - 8°C
- Wide measuring range: 2.94 - 123 ng/ml
- Excellent sensitivity: 2.94 ng/ml
- Intra assay precision 4.92% at 1010 pg/ml and 4.21% at 2504 pg/ml
- Fully quantitative determination of H-FABP in serum within 14 minutes
- Randox is the only provider of this assay in a fully automated format
- Using a combination of H-FABP and Troponin has been shown to significantly improve the diagnostic sensitivity for MI/ACS during the early hours after symptom onset compared to using Troponin alone

sLDL Cholesterol

Cat. No: **562616** R1 1 x 19.8 ml, R2 1 x 8.6 ml

LDL cholesterol is a major risk factor for cardiovascular disease (CVD). Small LDL Cholesterol (sLDL) is particularly atherogenic; a person with elevated sLDL levels has a three-fold increased risk of myocardial infarction (MI).

Key Features

- Wide measuring range: 4.0 – 100 mg/dL
- Liquid ready-to-use reagents stable to expiry when stored at 2 - 8°C
- Intra-assay precision was assessed in 10 replicated measurements and CVs were always below 3%
- Randox are the only company to provide a direct method for the quantitative determination of sLDL cholesterol on a wide range automated chemistry analysers

NEFA

Cat. No: FA115 RI 3 x 10ml, R2 3 x 20ml

Non-esterified fatty acids (NEFA) contribute only a small proportion of the body's fat; however they provide a large part of the body's energy. Measurement of NEFA is important in diabetes where insulin deficiency results in the metabolism of fat. Levels are also frequently increased in obese patients.

Key Features

- Wide measuring range: 0.04 – 2 mmol/l
- Excellent sensitivity 0.04 mmol/l
- Intra-assay precision 4.74% at 1.73 mmol/l and 4.81% at 1.20 mmol/l
- Total precision 4.51% at 1.73 mmol/l and 4.32% at 1.20 mmol/l
- Strong correlation with standard methods

Superoxide Dismutase (Ransod)

Cat. No: SD125 5 x 20ml

Superoxide Dismutase (SOD) catalyses the dismutation of superoxide into oxygen and hydrogen peroxide, consequently providing protection against superoxide which is one of the most common free radicals in the body. SOD levels have been found to decrease with age, while free radicals in the body increase with age which suggests this enzyme plays a major role in the ageing process. There is great interest in determining the potential of superoxide dismutase in anti-ageing treatments and cosmetics.

Key Features

- Wide measuring range: 0.06 to 4.52 U/ml
- Excellent sensitivity: 0.06 U/ml
- Intra-assay precision 8.13% at 0.21 U/ml and 4.93% at 2.17 U/ml
- Inter-assay precision 8.87% at 0.21 U/ml and 4.70% at 2.34 U/ml
- Can be used for research into the inflammatory response of cells and assessing heart damage and also the determination of the therapeutic efficacy and antioxidant potential of newly developed drugs

Total Antioxidant Status

Cat. No: NX2332 5 x 10 ml

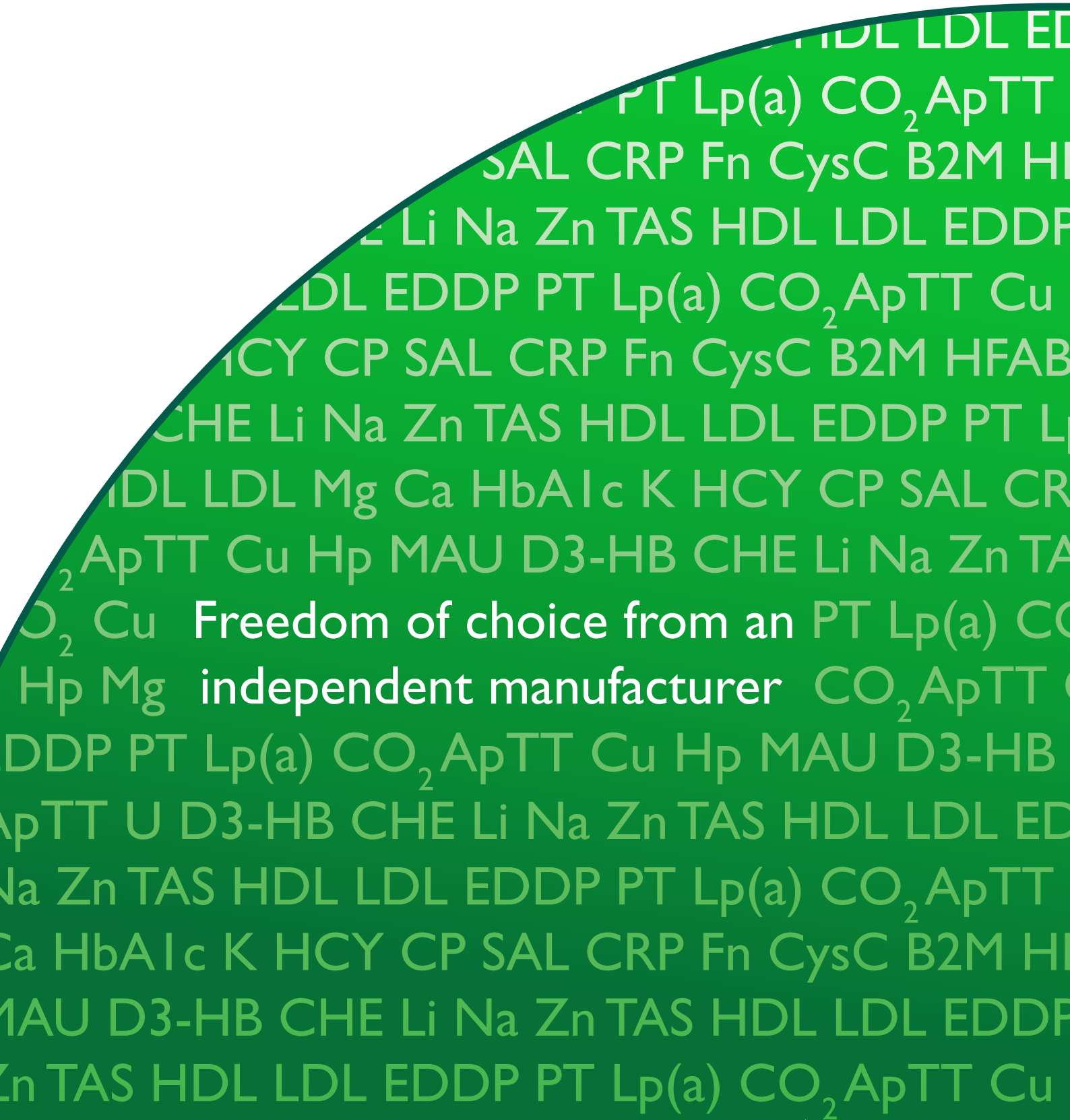
The antioxidant defence system has many components. A deficiency in any of these components can cause a reduction in the overall antioxidant status of an individual. Reduction in total antioxidant status has been implicated in several disease states, such as cancer and heart disease. The Randox TAS kit measures the total antioxidant capacity of a sample.

Key Features

- Wide measuring range: 0.21 – 2.94 mmol/l
- Excellent sensitivity: 0.21 mmol/l
- Intra-assay precision 5.06% at 0.93 mmol/l and 1.33% at 2.31 mmol/l
- Inter-assay precision 4.07% at 1.13 mmol/l and 3.86% at 2.26 mmol/l
- Only commercially available antioxidant kit suitable for automation
- Takes only three minutes to measure reaction



For more information on the full range of high performance and unique tests available from Randox, please visit www.randox.com or contact your local representative.



Freedom of choice from an independent manufacturer

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