L-Serine (with 340 nm) Assay Kit

Cat. No. Kit-9839 **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Testing reagent for the quantitative determination of Serine in various samples.
Instruments	This assay is designed to run on clinical chemistry analyzers. Refer to relevant user's manual or Laboratory internal practice for routine maintenance procedures. Instrument applications are available upon request.
Composition of the reagent(s)	Bottle 1 (41 mL) Enzymes: Tris Buffer, LDH-35 KU/L, TCEP-0.5 mmol/L, NADH-0.47 mmol/L, PRESERVATIVES Bottle 2 (9 mL) Enzymes: Tris Buffer, Cystathionine β-Synthase-20 KU/L, Cystathionine β-lyase -10 KU/L, PRESERVATIVES Bottle 3 (green cover) L-homocysteine(powder) Bottle 4 (blue cover) (1 mL) Dilution of Bottle 3 Bottle 5 (green cover) (1 mL, 50μM) L-serine cal(liquid) Bottle 6 (red cover) (1 mL, 20μM) L-serine control (Liquid)
Procedures	Add 1ml of HCY dilution to the HCY powder tube, mix thoroughly and add to R1 at a concentration of 6 μL/ml. Dilute the HCY powder, dispense and store at -20 centigrade. 1. Assay conditions: Wavelength: 340 nm Assay code: 2 Point End Cuvette: 1 cm. light path Temperature: 30 or 37 centigrade 2. Standard procedures: R1 (μL): Blank: 180 Calibrator: 180 Sample: 180 Sample (μL): Blank: 30 Calibrator: 30 Sample: 30 Calibrator (μL): Blank: 30 Calibrator: 30 Sample: 30 3. Gently mix and Incubate at 37 centigrade for 5 minutes and measure the change of Optical Density) OD1. 4. Add: R2 (μL): Black: 40 Calibrator:40 Sample: 40 5. Gently mix and incubate at 37 centigrade for 1 minute. 6. Measure the change of Optical Density) OD2 over the next 5 minutes. Using recommended Calibrator, calibrate the assay: - When using a new reagent kit or changing lot number. - Following preventive maintenance or

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	replacement of a critical part of the photometer used.
Principle	L-homocysteine (HCY) is converted to cystathionine by the use of CBS (cystathionine beta-synthase) and L-Serine. The cystathionine is then broken down to homocysteine, pyruvate and ammonia. Pyruvate is converted to lactate via lactate dehydrogenase with NADH as coenzyme. The rate of NADH conversion to NAD+ (Δ A340 nm) is directly proportional to the concentration of L-Serine. (Figure 1)
Sensitivity	The Lower Detectable Level was estimated at 2 μmol/L.
Interfering substances	Results of study are as follows: Bilirubin (mixed isomers): Less than 10% interference up to 600 μmol/L Bilirubin Haemolysis: Less than 10% interference up to 500 mg/dL Haemoglobin Lipemia: Less than 10% interference up to 500 mg/dl Lipemia
Linearity	This assay is linear up to 80 μmol/L. For samples with a higher concentration, dilute 1:1 with 0.9% NaCl (9g/L) and re-assay. Multiply result by 2.
Performance characteristics	Performance results can vary with the instrument used. Data obtained in each individual laboratory may differ from these values.
Calculations	[ΔA(OD2-OD1)Sample/ΔA(OD2-OD1)Calibrator]×Concentrationof Calibrator. = Concentration
Stability	2-8 centigrade

GENE INFORMATION

Synonyms	L-Serine

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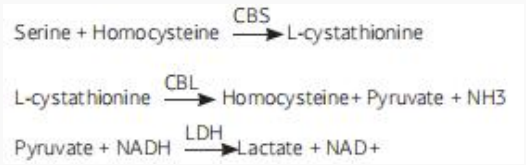

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