Thiopental (serum)

Pseudonyms – Sodium Thiopental, Sodium Pentothal, thiopentone, Trapanal

General information

Thiopental is a short acting, rapid onset barbiturate that acts as a CNS depressant and is used for the induction of general anaesthesia.

The test is carried out following withdrawal of the treatment to assess whether thiopental has fallen sufficiently for the effect of the drug not to influence the brain stem criteria tests. This assay is performed purely to assist the medical team in making critical clinical decisions, it is not performed for therapeutic drug monitoring purposes.

Collection container:

Serum - preferred (Sarstedt Brown top, 4.9ml; white top, 1.2ml Paed)


Plasma – lithium heparin (Sarstedt Orange Top, 4.9ml; 12ml paed)

Type and volume of sample:

Serum/plasma 1ml (200µl separated serum/plasma required)

Specimen transport/special precautions:

Samples should be taken after the drug has been withdrawn. This test is not indicated for therapeutic monitoring so samples should not be taken whilst treatment is ongoing. Please notify the laboratory prior to sending the sample.

External users – if sample is to be sent the next day, freeze the sample overnight then send via courier (sample does not need to be kept frozen but freezing prior to transport will ensure adequate temperature is maintained. Bleep the Duty Biochemist (via switch on 0161 276 1234) prior to sending as the assay is run on demand.

Laboratory information

Method principle:

HPLC Separation with UV Detection at 273nm

Biological reference range:

Not applicable – test is aimed at assessing adequate clearance of the drug before brain stem testing can commence (see clinical decision point).

Turnaround times:

1 week

Clinical information

Factors known to significantly affect the results:

Lamotrigine is used as an Internal Standard for this assay – please indicate with the request whether the patient has received this drug within the last 48 hours.

Clinical decision points:

It is recommended that brain-stem testing should not be undertaken if the concentration is >5mg/L (1).

References:

A code of Practice for the Diagnosis and Confirmation of Death (2008): Academy of Medical Royal Colleges.

(Last updated November 2019)