

Evaluation of Opiate results

Cut-off value

300 ng/mL

Cross-reactivity

This assay detects morphine, heroin (diacetylmorphine), 6-monoacetyl morphine, codeine, dihydrocodeine, hydrocodone, hydromorphone, and oxycodone (in high levels).

This assay will not detect methadone or buprenorphine (a buprenorphine assay is available at an extra charge).

Metabolism

Heroin (half-life = 10 minutes) is rapidly metabolised to 6-monoacetyl morphine and morphine. 80% of the dose is excreted within 24 hours.

Morphine (half-life = 2 hours) is metabolised to morphine-3 and morphine-6 glucuronides. 84% of the dose is excreted within 8 hours.

Codeine (half-life = 3 hours) is metabolised to morphine (except in 10% of the Caucasian population) and norcodeine. 86% of the dose is excreted within 24 hours.

Dihydrocodeine (half-life = 4 hours) is metabolised to nordihydrocodeine and dihydromorphine. 20–30% of the dose is excreted within 24 hours.

Hydrocodone (half-life = 4 hours) is a metabolite of codeine. 26% of the dose is excreted in 72 hours. Hydrocodone is metabolised to hydromorphone.

Hydromorphone (half-life = 1.5–4 hours). 36% of the dose is excreted within 72 hours.

Heroin, morphine, and their metabolites are usually detectable for 36–48 hours following a standard dose.

Some of these compounds are present in prescription and over-the-counter preparations. Thin Layer Chromatography (or Gas Chromatography/Mass Spectrometry [GC/MS], if the results will be used for medico-legal purposes) is available on request to identify any cross-reacting compound present, if this is suspected.

Interferences

High levels of naltrexone may cause false positive results.