Who we are

Majority owned by the NHS, but with the commercial freedom to invest in innovation, Viapath are on a mission to transform pathology services in the UK. We provide pathology services to the NHS, private hospitals and other organisations both across the country and internationally.

What we do

All our laboratories are either accredited or working towards accreditation by UKAS to ISO15189. To view our laboratory accreditation status please follow this link:

http://www.viapath.co.uk/about-viapath/quality-and-governance/accreditations

### TEST OVERVIEW

**Description**

Quetiapine, N-desalkylquetiapine, O-desalkylquetiapine and 7-hydroxyquetiapine by LC-MS/MS

**Clinical details**

Quetiapine is a dibenzothiazepine derivative that is licensed for the treatment of schizophrenia in an immediate release (IR) formulation. An extended release (ER) formulation has also been licensed in the UK (March 2010) for use in depression and in bipolar disorder. It is generally given at an initial dose of 25 mg twice daily, with increases in increments of 25–50 mg 2 or 3 times daily on the second and third days, as tolerated, to a target dose range of 600 to 800 mg/d by day 4 for the treatment of schizophrenia. Quetiapine is metabolised to sulfoxide, 7-hydroxy, N-desalkyl, O-desalkyl, and 7-hydroxy-N-desalkyl metabolites by cytochromes P450 (CYP) 3A4 and CYP3A5, with a possible minor contribution from CYP2D6. N-Desalkylquetiapine may be a major contributor to the antidepressant effect of quetiapine. Quetiapine reaches peak plasma concentrations 1–2 hours post-dose (5 hours post-dose for ER) and has a plasma half-life of 5–7 hours, with the half-lives of quetiapine sulfoxide, 7-hydroxyquetiapine, and of N-desalkylquetiapine being reported as 5–6, 5–6, and 11–12 hours, respectively. There is currently no widely accepted target range for pre-dose plasma quetiapine concentrations associated with either optimal clinical response, or minimal adverse effects when used to treat schizophrenia. However, a target range of 100 to 500 µg/L has been suggested. In 59 pre-dose TDM samples [dose (median, range) 600, 300–1500 mg/d] the plasma concentrations (median, range) were (µg/L): quetiapine 116 (2–748), N-desalkylquetiapine 127 (8–417), O-desalkylquetiapine 15 (< 1–59) and 7-hydroxyquetiapine 4 (< 1–48). Measurement of quetiapine and metabolites can be useful in assessing adherence, in dose adjustment, and the investigation of suspected acute poisoning.

### ORDERING INFORMATION

**Sample type and Volume required**

2mL EDTA whole blood or 1 mL plasma or serum (pre-dose or 'trough' sample). Serum or plasma can be used if required, but please avoid gel-separator tubes.

**Storage and transport**

Please refrigerate (if possible) if not sending immediately. Send by first class post.

**Contacts**

Toxicology Department at King’s Hospital
QUETIAPINE AND METABOLITES

5 working days

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How can we help?

We have a number of partnering options to suit your needs, whether you require this specific test or a range of services, we are here to help. Contact one of our friendly Business Development Managers for more information, or visit our website.