Mebendazole

General	
• Class of the drug:	Anthelmintics
• Synonym(s):	
• Common trade name(s) in Switzerland:	Vermox®
• Conversion factors:	*mg/l x 3.39 = µmol/l* *µmol/l x 0.295 = mg/l*
Clinical pharmacology	
• Indications for TDM:	Individual dose adaptation
• Protein binding:	90 %
• Elimination half-life:	2.5-5.5 h
• Volume of distribution:	Not known
• Metabolism:	
- Main metabolic pathways:	Formation of amino- and hydroxymetabolites (larger plasma concentration compared to mebendazole)
- Active metabolite(s)?	Insignificant activity of major metabolites
- Inhibitor or inducer of the cytochrome P450 system?	Inducer of hepatic microsomal oxidizing system (enzyme(s) not known)
- Other significant pharmacokinetic interactions:	Not known
• Elimination of parent drug:	Mainly hepatic
• Typical therapeutic range:	> 0.074 mg/l (>250 nmol/l) for treatment of echinococcosis
• Potentially toxic concentration:	> 1 mg/l should be avoided
Pre-analytics	
• Time to steady-state since beginning of treatment or change of posology:	2 – 4 days
• Time for blood sampling:	4 h after last dose
• Type(s) of sample:	Serum or plasma
• Stability:	Several days at 4°C

Analytics	
• Position(s) in the analysis list/Method:	8631.02 HPLC/GC 8631.03 LC-MS/GC-MS
Remarks	• The large inter- and intraindividual variability is due to the low bioavailability that is related to the low solubility of mebendazole; bioavailability is increased with concomitant intake of a fatty meal. • Cholestasis increases blood levels. • Only serum or plasma samples should be shipped (mebendazole is not stable in the collected blood samples).
References	• *Witassek et al., Eur. J. Clin. Pharmacol. 20 (1981) 427* • *Arzneimittel Kompendium der Schweiz, Documed, 2005* • *Gottstein and Reichen, in G.C. Cook, Manson's Tropical Diseases, Saunders, 1996, 1486-1508* • *Bresson-Hadni et al., in J. Bircher, J.-P. Benhamou, N. McIntyre, M. Rizzetto, J. Rodés, Oxford Textbook of Clinical Hepatology, Vol. I (2nd Edition), Oxford University Press, Oxford, 1999, 1066-1076*