Voriconazole

General	
• Class of the drug:	Antimycotics
• Synonym(s):	
• Common trade name(s) in Switzerland:	Vfend®
• Conversion factors:	*mg/l x 2.86 = µmol/l* *µmol/l x 0.35 = mg/l*
Clinical pharmacology	
• Indications for TDM:	Individual dose adaptation
• Protein binding:	58 %
• Elimination half-life:	About 6 h for 200 mg (nonlinear pharmacokinetics)
• Volume of distribution:	2 – 4.6 l/kg
• Metabolism:	
- Main metabolic pathways:	N-oxidation and hydroxylation by CYP2C19, CYP2C9, CYP3A4
- Active metabolite(s)?	None
- Inhibitor or inducer of the cytochrome P450 system?	Inhibits CYP2C19, CYP2C9 and CYP3A4
- Other significant pharmacokinetic interactions:	No
• Elimination of parent drug:	Mainly hepatic Renal < 2%
• Typical therapeutic range:	1 - 6 mg/l (2.9 – 17.2 µmol/l)
• Potentially toxic concentration:	Not known
Pre-analytics	
• Time to steady-state since beginning of treatment or change of posology:	5 - 6 days (about 1 day with loading dose)
• Time for blood sampling:	Before next dose at steady state
• Type(s) of sample:	Serum or plasma
• Stability:	Several days at 4°C

Analytics	
• Position(s) in the analysis list/Method:	8632.02 HPLC/GC 8632.03 LC-MS/GC-MS
Remarks	• Genotype status for CYP2C19 and/or coadministration of drugs that modulate CYP2C19 and CYP3A4 activities could affect voriconazole drug levels. • The target range for CSF and aqueous humour is only 50% of the respective value in serum or plasma, due to missing proteins
References	• *Johnson and Kauffman, Rev. Antiinfective Agents 36 (2003) 630* • *Arzneimittel Kompendium der Schweiz, Documed, 2005* • *Purkins et al., Br. J. Clin. Pharmacol. 5 6(2003)2; ibid 56 (2003) 10; ibid 56 (2003) 17* • *Roffey et al., Drug Metab. Dispos. 31 (2003) 731.* • *Hyland et al., Drug Metab. Dispos. 31 (2003) 540*