**Introduction:**
The combination of trimethoprim and sulfametrole (TMP-SMT, Rokiprim®) is active against multi-drug resistant bacteria and Pneumocystis jirovecii. In critically ill patients undergoing continuous veno-venous haemofiltration (CVVH), however, its use is limited because of lacking pharmacokinetic data.

**Methods:**
Pharmacokinetics of both drugs were determined after standard doses in patients on CVVH and in critically ill patients with approximately normal renal function. Quantification of TMP and SMT was done by high pressure liquid chromatography (HPLC) and UV detection after pre-purification by solid phase extraction. The total clearance (CLtot) was estimated from arterial plasma levels and the haemofilter clearance (CLHF) from plasma and ultrafiltrate concentrations.

**Results:**
Six patients on CVVH (3 after the first dose, 3 at steady state) and nine patients off CVVH have been enrolled (4 after first dose, 7 at steady state). After a single dose, CLtot of SMT was 3.5 (1.8-3.8, median [range]) and 1.7 (1.1-2.7) L/h on and off CVVH, respectively. At steady state, we observed a CLtot of 1.0 (0.5-1.0) and 0.3 (0.2-0.9) L/h, respectively, on and off CVVH. Steady state trough levels (Cmin) of SMT amounted to 52-113 mg/L in patients on CVVH and 18-145 in patients off CVVH. CLtot of TMP was 4.4 (2.5-5.3) L/h on CVVH and 5.4 (3.2-9.9) L/h off CVVH after the first dose. At steady state, its CLtot amounted to 0.8 (0.4-0.8) and 1.0 (0.6-1.9) L/h on and off CVVH, respectively. Cmin was 4-12 mg/L on CVVH and 3-9 mg/L in patients off CVVH. CLHF accounted for 22-68% of CLtot of SMT and 28-72% of CLtot TMP.

**Conclusion:**
Exposure to both antimicrobial agents is highly variable, but comparable in patients on and off CVVH. As considerable amounts of SMT and TMP are eliminated by CVVH, no excessive accumulation appears to take place during treatment with standard doses.