

SUPPLEMENTARY MATERIALS

Residue depletion profile and estimation of withdrawal period for sulfadimethoxine and ormetoprim in edible tissues of Nile tilapia (*Oreochromis* sp.) on medicated feed

Lucas Victor Pereira de Freitas^{1,†}, Carlos Augusto Alvarenga da Mota Júnior^{1,†}, Marina Alves Damaceno¹, Juliana Grell Fernandes Silveira¹, Ana Carolina Velloso Portela¹, Sarah Chagas Campanharo¹, Agnaldo Fernando Baldo da Silva¹, Inácio Mateus Assane², Fabiana Pilarski², James Jacob Sasanya³, and Jonas Augusto Rizzato Paschoal^{1,*}

¹ School of Pharmaceutical Sciences of Ribeirão Preto, Department of Biomolecular Sciences, University of São Paulo (USP), Ribeirao Preto, SP 14040-900, Brazil

² Laboratory of Microbiology and Parasitology of Aquatic Organisms, Sao Paulo State University (Unesp), Aquaculture Center of Unesp, Jaboticabal, SP 14884-900, Brazil

³ International Atomic Energy Agency, Vienna A-1400, Austria.

* Correspondence: paschoal@usp.br

† These authors contributed equally to this work

Table S1. The selected reaction monitoring (SRM) acquisition parameters for monitoring the target analytes.

Analyte	Molecular formula	Precursor ion (m/z)	Monitored transitions	Cone voltage (V)	Collision energy (eV)
SDM	$\text{C}_{12}\text{H}_{14}\text{N}_4\text{O}_4\text{S}$	311	311 > 156 ¹	55	35
			311 > 245 ²	55	35
OMP	$\text{C}_{14}\text{H}_{18}\text{N}_4\text{O}_2$	275	275 > 259 ¹	35	30
			275 > 123 ²	35	21
IS	$\text{C}_{10}\text{H}_{11}\text{N}_3\text{O}_3\text{S}$	254	254 > 156 ¹	60	40
			254 > 98 ²	60	52

¹ Quantifier transition; ² qualifier transition

SDM = sulfadimethoxine; OMP = ormetoprim; IS = Internal standard (sulfamethoxazole)

Table S2. Parameters of evaluation to assess the reliability of the analytical method for determination of SDM and OMP in fish feed.

Parameter	OMP	SDM
Linear range ($\mu\text{g mL}^{-1}$)	0.2 – 1.0	1.0 – 5.0
Linearity (r)	0.9952 – 1.00	0.9981 – 1.00
Intra-day precision (CV, %, n = 3)		
OMP = 0.4; SDM = 2.0 ($\mu\text{g mL}^{-1}$, n = 3)	0.7	1.2
OMP = 0.6; SDM = 3.0 ($\mu\text{g mL}^{-1}$, n = 3)	2.2	0.9
OMP = 0.8; SDM = 4.0 ($\mu\text{g mL}^{-1}$, n = 3)	1.0	1.3
Inter-days precision (CV, %, n = 3)		
OMP = 0.4; SDM = 2.0 ($\mu\text{g mL}^{-1}$, n = 3)	2.2	1.8
OMP = 0.6; SDM = 3.0 ($\mu\text{g mL}^{-1}$, n = 3)	2.4	1.8
OMP = 0.8; SDM = 4.0 ($\mu\text{g mL}^{-1}$, n = 3)	2.3	0.8
Intra-day trueness (recovery, %, n = 3)		
OMP = 0.4; SDM = 2.0 ($\mu\text{g mL}^{-1}$, n = 3)	100.2	99.1
OMP = 0.6; SDM = 3.0 ($\mu\text{g mL}^{-1}$, n = 3)	102.5	101.1
OMP = 0.8; SDM = 4.0 ($\mu\text{g mL}^{-1}$, n = 3)	101.9	100.2
Inter-day trueness (recovery, %, n = 3)		
OMP = 0.4; SDM = 2.0 ($\mu\text{g mL}^{-1}$, n = 3)	98.7	100.2
OMP = 0.6; SDM = 3.0 ($\mu\text{g mL}^{-1}$, n = 3)	102.9	102.1
OMP = 0.8; SDM = 4.0 ($\mu\text{g mL}^{-1}$, n = 3)	101.7	100.7

SDM = sulfadimethoxine; OMP = ormetoprim; CV = coefficient of variation;

Table S3. Parameters of evaluation to assess the reliability of the analytical method for determination of SDM and OMP in fish fillet.

Parameter	OMP	SDM
Linear range (ng g^{-1})	20.0 – 260	20.0 – 260
Linearity (r)	0.997 – 0.99	0.996 – 1.00
Intra-day precision (CV, %, n = 3)		
20 (ng g^{-1} , n = 3)	2.3	8.4
140 (ng g^{-1} , n = 3)	3.6	3.8
260 (ng g^{-1} , n = 3)	0.8	1.9
Inter-days precision (CV, %, n = 3)		
20 (ng g^{-1} , n = 3)	2.5	5.1
140 (ng g^{-1} , n = 3)	0.9	3.3
260 (ng g^{-1} , n = 3)	0.9	4.7
Trueness (recovery, %, n = 3)		
OMP = 0.4; SDM = 2.0 ($\mu\text{g mL}^{-1}$, n = 3)	107	85.0
OMP = 0.6; SDM = 3.0 ($\mu\text{g mL}^{-1}$, n = 3)	95.0	106
OMP = 0.8; SDM = 4.0 ($\mu\text{g mL}^{-1}$, n = 3)	101	99.0
LOD (ng/g, n = 3)	1.0	3.0
LOQ (ng/g, n = 3)	20.0	20.0
LOQ precision (CV, %, n = 3)	2.3	8.4
LOQ trueness (recovery, %, n = 3)	107.2	85.4

SDM = sulfadimethoxine; OMP = ormetoprim; CV = coefficient of variation; LOD = limit of detection; LOQ = limit of quantification

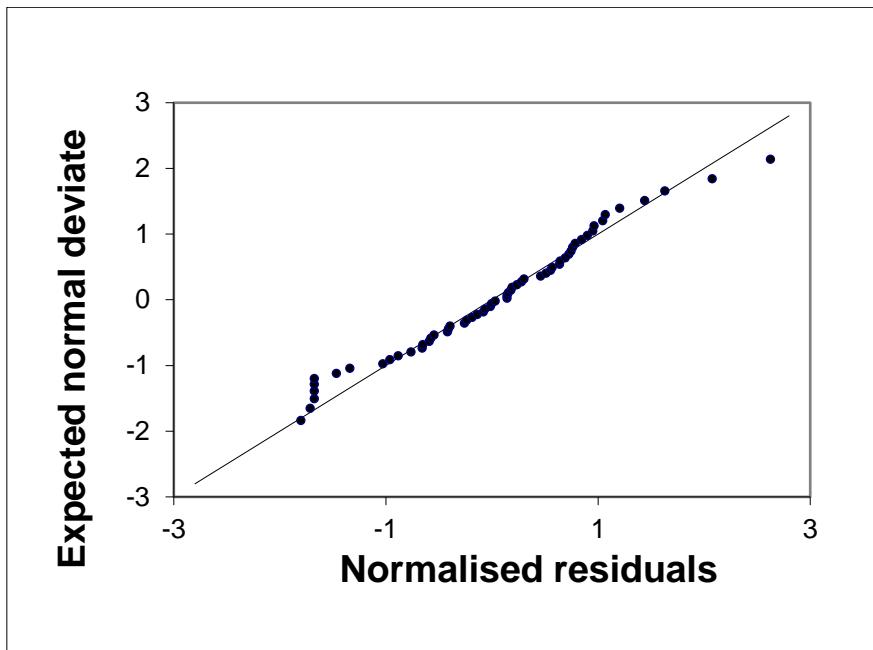


Fig. S1. Graph of the ordered normalized residuals versus their cumulative frequency, prepared on a normal probability scale.