Electronic Supplementary Material (ESI) for Analytical Methods.

Determination of quinolone antibiotics in honey by pH-induced natural deep eutectic solvent combined with vortex-assisted dispersive liquid-liquid microextraction

Xiaoming Zhu[1], Chenyang Zhao[1], Jun Liu, Feng Qin*, Zhili Xiong*, Longshan Zhao

(School of Pharmacy, Shenyang Pharmaceutical University, Shenyang, Liaoning 110016, China)

Corresponding author: School of Pharmacy, Shenyang Pharmaceutical University, 103 Wenhua Road Shenhe District, 110016, Shenyang, Liaoning Province, P. R. China.

* Corresponding author.

E-mail addresses: qf-1998@163.com (Feng Qin), bearry200@126.com (Zhili Xiong).

1: These authors contributed equally to this work.

Table S1 The composition and molar ratio of NADESs investigated in the study

Abbreviation	Hydrogen bond donor	Hydrogen bond acceptor	Molar ratio
NADES1	Dodecanol	Octanoic acid	1:1
NADES2	Octanoic acid	Lauric acid	3:1
NADES3	Thymol	Octanol	1:1
NADES4	Thymol	Octanoic acid	1:1
NADES5	Thymol	Decanoic acid	1:1
NADES6	DL-menthol	Octanoic acid	1:1
NADES7	DL-menthol	Decanoic acid	1:1
NADES8	DL-menthol	Thymol	1:1

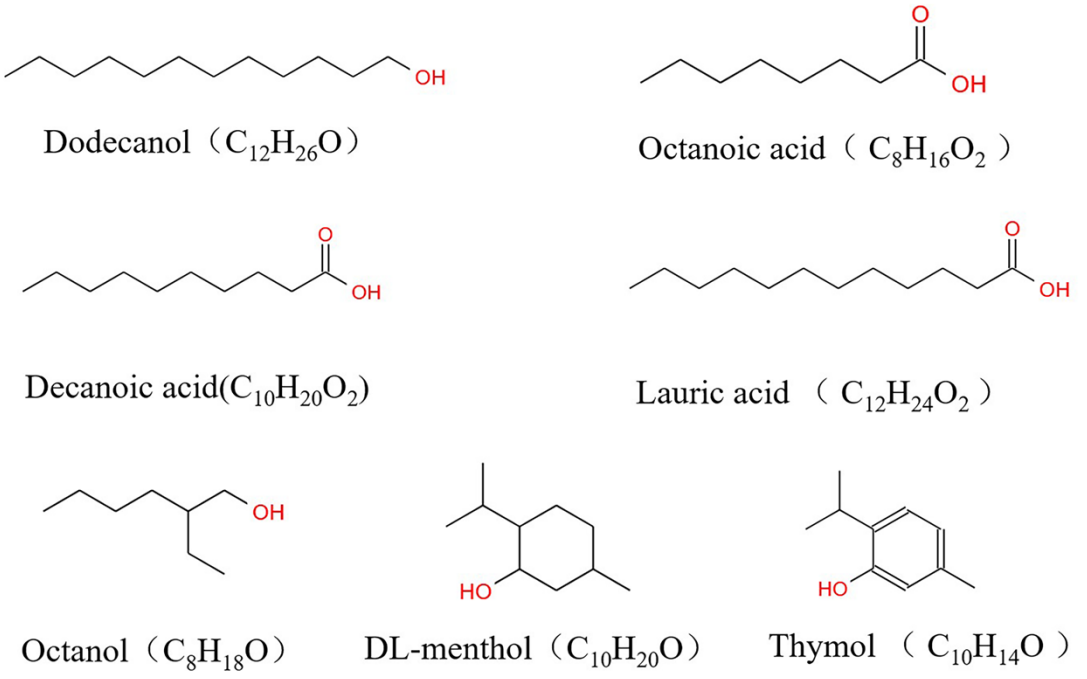

Fig.S1 Chemical and structural formulae for hydrogen bond acceptors and hydrogen bond donors

Table S2 Matrix effect (ME) of the proposed method

Analytes	ME (mean± SD) (%)
OFL	99.7±2.6
CIP	101.3±3.2
ENR	95.1±2.7

Table S3 Determination of ofloxacin, ciprofloxacin and enrofloxacin in six honey samples

Analyte	Honey 1	Honey 2	Honey 3	Honey 4	Honey 5	Honey 6
OFL	ND	ND	ND	ND	ND	ND
CIP	ND	ND	ND	ND	ND	ND
ENR	ND	ND	ND	ND	ND	ND

ND, not detected

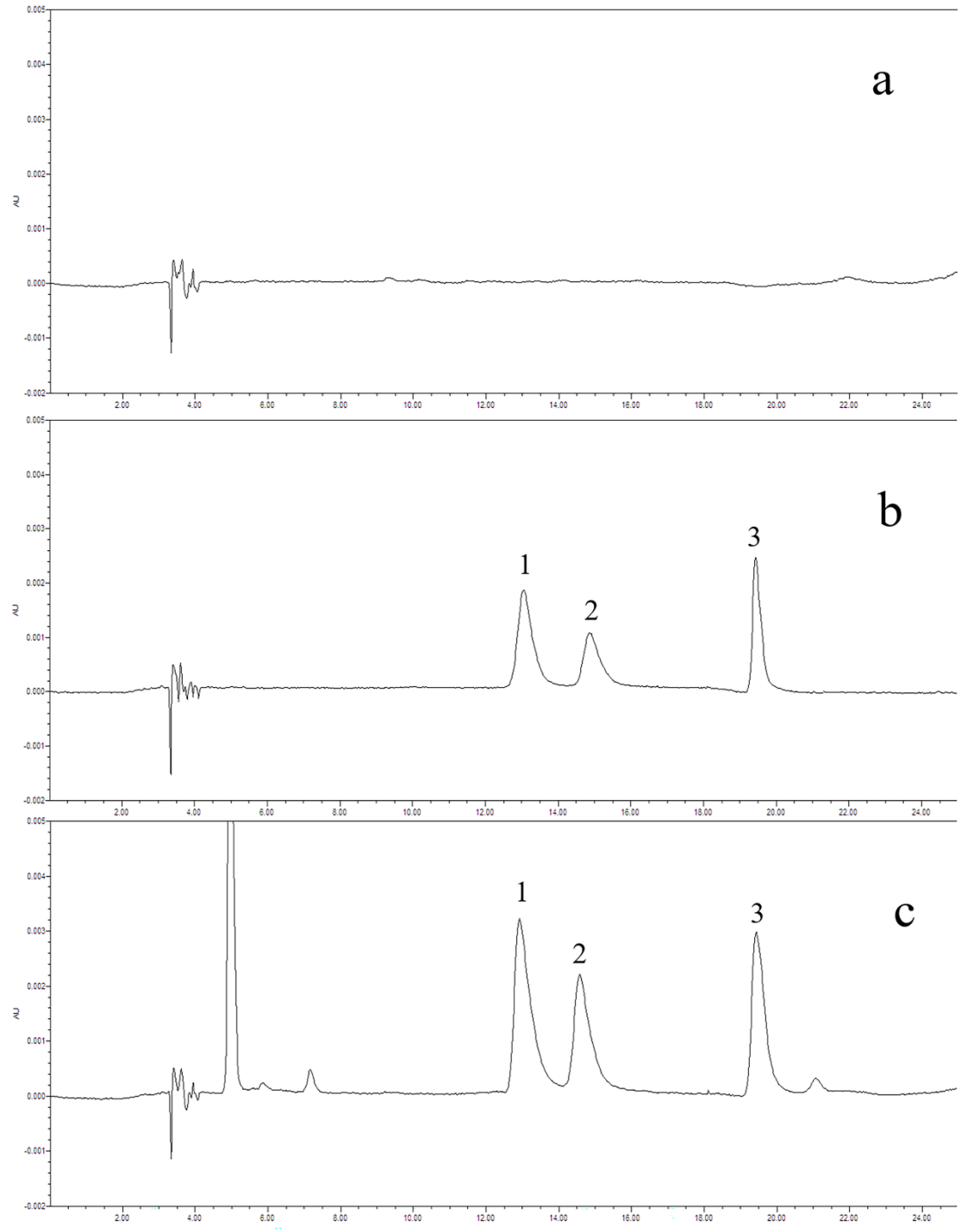

Fig.S2 The chromatograms of the blank solution (a), the mixed standard solution (b), and spiked sample solution (c). 1.Ofloxacin; 2. Ciprofloxacin hydrochloride; 3. Enrofloxac