

Appendix A Characterization of the 73 ESBL-producing *E. coli* isolates from bovine mastitis cases in China

<i>E. coli</i> strain	Sampling province	β-Lactamase	β-Lactam antibiotic resistances										Additional resistance
			AM	AMC	CTX	CXM	CAZ	CEC	CPD	AZT	IPM	MPN	
X2	Xinjiang	CTX-M-15+TEM-1	R	I	R	R	S	R	R	S	S	S	S, GM, TE, NAL, STX, C
X5	Xinjiang	CTX-M-3+TEM-1	R	I	R	R	S	R	R	R	S	S	S, GM, TE, NAL, STX, C
X13	Xinjiang	CTX-M-15+TEM-1	R	I	R	R	S	R	R	I	S	S	S, GM, TE, CIP, NAL, STX, C
G5	Gansu	CTX-M-15+TEM-1	R	S	R	R	S	R	R	S	S	S	S, STX
G6	Gansu	CTX-M-15+TEM-1	R	R	R	R	S	R	S	S	S	S	S
G7	Gansu	CTX-M-14+TEM-1	R	R	R	S	S	R	R	R	S	S	S, GM, TE, CIP, NAL, STX, C
G9	Gansu	CTX-M-15	R	R	R	R	R	R	R	R	S	S	GM, TE, CIP, NAL, STX
G11	Gansu	CTX-M-15+TEM-1	R	R	R	R	R	R	R	R	S	S	GM, TE, CIP, NAL, STX
G12	Gansu	CTX-M-15	R	S	R	R	S	R	R	S	S	S	S, GM, CIP, NAL, C
G13	Gansu	CTX-M-15	R	R	R	I	R	R	R	R	S	S	GM, TE, CIP, NAL
G18	Gansu	TEM-1	R	S	I	R	S	R	R	R	S	S	S, GM, TE, NAL, STX
G19	Gansu	CTX-M-15+TEM-1	R	R	R	R	S	I	R	R	S	S	S, GM, TE, CIP, NAL, STX, C
G21	Gansu	CTX-M-14+TEM-1	R	R	R	R	R	R	R	R	S	S	S, GM, TE, CIP, NAL, STX, C
G25	Gansu	CTX-M-15+TEM-1	R	R	R	R	S	R	R	S	S	S	S, GM, TE, CIP, STX, C
G28	Gansu	CTX-M-15+TEM-1	R	R	R	R	R	R	R	R	S	S	GM, TE, CIP, NAL
G29	Gansu	CTX-M-15+TEM-1	R	R	R	R	R	R	R	R	S	S	S, GM, TE, CIP, NAL, STX, C
G37	Gansu	CTX-M-15	R	R	R	R	R	R	R	R	S	S	S, TE, NAL, STX, C
G44	Gansu	CTX-M-64	R	R	R	R	R	R	R	R	S	S	S, GM, TE, NAL, STX, C
G46	Gansu	CTX-M-64+TEM-1	R	R	R	R	R	R	R	R	S	S	S, GM, TE, NAL, STX, C
G52	Gansu	CTX-M-15+TEM-1	R	S	R	R	I	R	R	I	S	S	S, TE, CIP, NAL, STX, C
G60	Gansu	CTX-M-14+TEM-1	R	R	R	R	I	R	R	I	S	S	S, GM, TE, CIP, NAL, STX, C
G63	Gansu	CTX-M-15+TEM-1	R	S	R	R	I	R	R	I	S	S	S, GM, TE, CIP, NAL, STX, C
G69	Gansu	CTX-M-65+TEM-1	R	R	R	R	S	R	R	I	S	S	S, GM, TE, CIP, NAL, STX, C
G77	Gansu	CTX-M-55+TEM-1	R	R	R	R	R	R	R	R	S	S	S, GM, TE, CIP, NAL, STX, C
G79	Gansu	CTX-M-15	R	S	R	R	S	R	R	S	S	S	TE, CIP, NAL, STX, C

I5	Inner-mongolia	CTX-M-15	R	R	R	R	R	R	R	R	S	S	GM, TE,CIP, NAL, STX, C
I9	Inner-mongolia	CTX-M-14	R	R	R	R	S	R	R	S	S	S	GM, TE,CIP, NAL, STX, C
I10	Inner-mongolia	CTX-M-65+TEM-1	R	R	R	R	S	R	R	S	S	S	S, TE,CIP, C
I16	Inner-mongolia	CTX-M-15+TEM-1	R	R	R	R	S	R	R	S	S	S	S, GM, TE,CIP, NAL, STX, C
I19	Inner-mongolia	CTX-M-15+TEM-1	R	R	R	R	R	R	R	R	S	S	S, GM, TE,CIP, NAL, C
I20	Inner-mongolia	CTX-M-15+TEM-1	R	S	R	R	S	R	R	I	S	S	TE,CIP, NAL, C
I22	Inner-mongolia	CTX-M-15+TEM-1	R	R	R	R	R	R	R	R	S	S	S, GM, TE,CIP, NAL, STX, C
I23	Inner-mongolia	CTX-M-15+TEM-1	R	S	R	R	S	R	R	I	S	S	S, TE, STX, C
I24	Inner-mongolia	CTX-M-65+TEM-1	R	R	R	R	S	R	R	R	S	S	S, TE, STX, C
I26	Inner-mongolia	CTX-M-15+TEM-1	R	S	R	R	S	R	R	R	S	S	S, TE, NAL, C
N1	Ningxia	CTX-M-15+TEM-1	R	R	R	R	R	R	R	R	S	S	S, GM, TE, NAL, C
N2	Ningxia	TEM-1	R	R	R	I	R	R	R	I	S	S	S, GM, TE, STX, C
N7	Ningxia	CTX-M-15+TEM-1	R	R	R	R	R	R	R	R	S	S	S, GM, TE,CIP, NAL, C
N9	Ningxia	CTX-M-15+TEM-1	R	R	R	R	R	R	R	R	S	S	S, GM, TE,CIP, NAL, STX, C
N10	Ningxia	CTX-M-15+TEM-1	R	R	R	R	S	R	R	S	S	S	S, TE, NAL, STX, C
N12	Ningxia	CTX-M-15	R	R	R	R	R	R	R	R	S	S	S, GM, TE,CIP, NAL, STX, C
N15	Ningxia	CTX-M-15	R	R	R	R	R	R	R	R	S	S	S, GM, TE,CIP, NAL, C
N16	Ningxia	CTX-M-15+TEM-1	R	R	R	R	R	R	R	R	S	S	S, GM, TE,CIP, NAL, STX, C
N19	Ningxia	CTX-M-55+TEM-1	R	R	R	R	R	R	R	R	S	S	S, GM, TE,CIP, NAL, STX, C
N22	Ningxia	CTX-M-15+TEM-1	R	R	R	R	R	R	R	R	S	S	S, GM, TE,CIP, NAL, STX, C
N27	Ningxia	CTX-M-14	R	S	R	R	S	R	R	S	S	S	S, GM, TE, NAL, C
N28	Ningxia	CTX-M-55	R	R	R	R	R	R	R	R	S	S	S, GM, TE,CIP, NAL, STX, C
N29	Ningxia	CTX-M-14+TEM-1	R	R	R	R	I	R	R	I	S	S	S, GM, TE, NAL, STX
N38	Ningxia	CTX-M-14+TEM-1	R	R	R	R	R	R	R	I	S	S	S, GM, TE, CIP
N44	Ningxia	CTX-M-15+TEM-1	R	R	R	R	I	R	R	I	S	S	S, GM, TE,CIP, NAL, STX, C
N45	Ningxia	CTX-M-15+TEM-1	R	R	R	R	R	R	R	R	S	S	S, GM, TE,CIP, NAL, STX, C
N48	Ningxia	CTX-M-15+TEM-1	R	R	R	R	R	R	R	R	S	S	S, GM, TE,CIP, NAL, STX, C
N56	Ningxia	CTX-M-15	R	R	R	R	I	R	R	R	S	S	S, GM, TE,CIP, NAL, STX, C

H3	Henan	CTX-M-15	R	R	R	R	R	R	R	R	S	S	S, GM, TE,CIP, NAL, STX, C
H9	Henan	CTX-M-55	R	R	R	R	I	R	R	R	S	S	S, TE, NAL, STX, C
S6	Sichuan	CTX-M-55	R	R	R	R	R	R	R	R	S	S	S, TE, C
SH1	Shaanxi	CTX-M-55+TEM-1	R	R	R	R	R	R	R	I	S	S	S, GM, TE, NAL, STX, C
SH2	Shaanxi	CTX-M-15+TEM-1	R	R	R	R	S	R	S	I	S	S	GM, TE,CIP, NAL, STX, C
SH3	Shaanxi	CTX-M-64+TEM-1	R	R	R	R	R	R	R	R	S	S	S, GM, TE,CIP, NAL, STX, C
SH6	Shaanxi	CTX-M-15+TEM-1	R	R	R	R	R	R	R	R	S	S	S, GM, TE,CIP, NAL, STX, C
SH9	Shaanxi	CTX-M-15+TEM-1	R	R	R	R	R	R	R	R	S	S	S, GM, TE,CIP, NAL
SH11	Shaanxi	CTX-M-15+TEM-1	R	R	R	R	R	R	R	R	S	S	S, GM, TE, NAL, STX
SH16	Shaanxi	CTX-M-15+TEM-1	R	S	R	R	I	R	R	I	S	S	S, GM, TE, STX
SH19	Shaanxi	CTX-M-15+TEM-1	R	R	R	R	I	R	R	R	S	S	S, GM, TE,CIP, NAL, STX, C
SH20	Shaanxi	CTX-M-14	R	R	R	R	S	R	R	I	S	S	S, TE,CIP, NAL, STX, C
SH22	Shaanxi	CTX-M-15	R	R	R	R	R	R	R	R	S	S	S, TE, C
SH25	Shaanxi	CTX-M-15	R	R	R	R	R	R	R	R	S	S	TE,CIP, STX, C
SH29	Shaanxi	CTX-M-15	R	S	R	R	S	R	R	I	S	S	S, GM, TE,CIP, NAL, STX, C
Q1	Qinghai	CTX-M-64	R	R	R	R	I	R	R	R	S	S	S, TE, NAL, STX, C
Q6	Qinghai	CTX-M-15+TEM-1	R	R	R	R	I	R	R	R	S	S	S, GM, CIP, NAL, STX
Q9	Qinghai	CTX-M-55+TEM-1	R	R	R	R	R	R	R	R	S	S	S, GM, TE,CIP, NAL
Q10	Qinghai	CTX-M-15+TEM-1	R	R	R	R	R	R	R	R	S	S	S, GM, TE,CIP, NAL, STX, C
Q14	Qinghai	CTX-M-15+TEM-1	R	R	R	R	R	R	R	R	S	S	S, GM, TE, NAL, STX

S, sensitive; I, intermediate; R, resistant

AM, Ampicillin; AMC, Amoxicillin-clavulanic acid; CTX, Cefotaxime; CXM, Cefuroxime; CAZ, Ceftazidime; CEC, Cefaclor; CPD, Cefpodoxime; AZT, aztreonam; IPM, Imipenem; MPN, Meropenem

S, Streptomycin; GM, Gentamicin; TE, Tetracycline; CIP, Ciprofloxacin; NAL, Nalidixic acid; STX, Trimethoprim-sulfamethoxazol; C, Chloramphenicol