

**Table S1.** Information of probiotic enterococcal isolates used for different application targets

Code of product	Origin	Name	Species	Amount per serving	Application targets
1	Beijing	Efm1	<i>E. faecium</i>	Unknown	Human
2	Beijing	Efm2	<i>E. faecium</i>	Unknown	Human
3	Switzerland	Efm3	<i>E. faecium</i>	Unknown	Human
4	Japan	Efm4	<i>E. faecium</i>	2×10 <sup>5</sup> -4×10 <sup>8</sup> CFUs per tablet	Human
5	Taiwan	Efm5	<i>E. faecium</i>	Unknown	Human
6	Jiangsu	Efm6	<i>E. faecium</i>	Unknown	Companion animal
7	Jiangsu	Efm7	<i>E. faecium</i>	1.0×10 <sup>10</sup> CFU/g	Companion animal
8	Japan	Efm8	<i>E. faecium</i>	300 billion/bag	Companion animal
9	Taiwan	Efm9	<i>E. faecium</i>	≥100 billion/g	Livestock
10	Taiwan	Efm10	<i>E. faecium</i>	≥2 billion/g	Livestock
11	Henan	Efm11	<i>E. faecium</i>	≥5 billion/g	Aquaculture
11	Henan	Efm12	<i>E. faecium</i>	≥5 billion/g	Livestock
12	Shandong	Efm13	<i>E. faecium</i>	≥4.5×10 <sup>10</sup> CFU/g	Livestock
13	Henan	Efm14	<i>E. faecium</i>	Unknown	Livestock
14	Jiangsu	Efm15	<i>E. faecium</i>	≥1 billion/g	Livestock
15	Liaoning	Efm16	<i>E. faecium</i>	Unknown	Livestock
16	Jiangsu	Efm17	<i>E. faecium</i>	Unknown	Livestock
17	Liaoning	Efm18	<i>E. faecium</i>	≥10 billion/g	Livestock
18	Hebei	Efm19	<i>E. faecium</i>	3-10 billion/g	Livestock
19	Shandong	Efm20	<i>E. faecium</i>	3-10 billion/g	Livestock
20	Guangdong	Efm21	<i>E. faecium</i>	Unknown	Livestock
21	Hubei	Efm22	<i>E. faecium</i>	≥10 billion/g	Livestock
22	Jiangsu	Efm23	<i>E. faecium</i>	Unknown	Livestock

23	Henan	Efm24	<i>E. faecium</i>	≥500 million/g	Livestock
24	Shandong	Efm25	<i>E. faecium</i>	Unknown	Livestock
25	Jiangxi	Efm26	<i>E. faecium</i>	≥10 billion/g	Livestock
26	Jiangxi	Efm27	<i>E. faecium</i>	Unknown	Livestock
26	Jiangxi	Efm28	<i>E. faecium</i>	≥1×10 <sup>10</sup> CFU/g	Livestock
27	Beijing	Efm29	<i>E. faecium</i>	30 billion/g	Livestock
28	Henan	Efm30	<i>E. faecium</i>	≥10 billion/g	Livestock
29	Guangdong	Efm31	<i>E. faecium</i>	Unknown	Livestock
30	Jiangsu	Efm32	<i>E. faecium</i>	Unknown	Livestock
31	Henan	Efm33	<i>E. faecium</i>	≥1.6×10 <sup>9</sup> CFU/g	Livestock
31	Henan	Efm34	<i>E. faecium</i>	≥1.6×10 <sup>9</sup> CFU/g	Livestock
32	Jiangxi	Efm35	<i>E. faecium</i>	Unknown	Aquaculture
33	Hubei	Efm36	<i>E. faecium</i>	Unknown	Aquaculture
34	Beijing	Efm37	<i>E. faecium</i>	20 billion/g	Aquaculture
35	Guangdong	Efm38	<i>E. faecium</i>	Unknown	Aquaculture
36	Hubei	Efm39	<i>E. faecium</i>	Unknown	Aquaculture
37	Beijing	Efm40	<i>E. faecium</i>	≥7.5×10 <sup>7</sup> CFU/g	Companion animal
38	Beijing	Efm41	<i>E. faecium</i>	≥1×10 <sup>7</sup> CFU/g	Companion animal
39	Jilin	Efm42	<i>E. faecium</i>	≥1.0×10 <sup>8</sup> CFU/g	Livestock
40	Jilin	Efm43	<i>E. faecium</i>	≥1.0×10 <sup>8</sup> CFU/g	Livestock
41	USA	Efm44	<i>E. faecium</i>	≥2×10 <sup>7</sup> CFU/g	Companion animal
42	Hebei	Efm45	<i>E. faecium</i>	≥1×10 <sup>9</sup> CFU/g	Companion animal
42	Hebei	Efm46	<i>E. faecium</i>	≥1×10 <sup>9</sup> CFU/g	Companion animal
43	Henan	Efm47	<i>E. faecium</i>	≥2×10 <sup>10</sup> CFU/g	Companion animal

44	UK	Efm48	<i>E. faecium</i>	$\geq 2 \times 10^8$ CFU/g	Companion animal
44	UK	Efm49	<i>E. faecium</i>	$\geq 2 \times 10^8$ CFU/g	Companion animal
45	USA	Efm50	<i>E. faecium</i>	$\geq 2.5 \times 10^{11}$ CFU/g	Companion animal
46	Hunan	Efm51	<i>E. faecium</i>	$\geq 4.2 \times 10^8$ CFU/g	Companion animal
46	Hunan	Efm52	<i>E. faecium</i>	$\geq 4.2 \times 10^8$ CFU/g	Companion animal
47	Hunan	Efm53	<i>E. faecium</i>	$\geq 1.8 \times 10^8$ CFU/g	Companion animal
48	Jiangxi	Efm54	<i>E. faecium</i>	$\geq 1.8 \times 10^{10}$ CFU/g	Aquaculture
49	Jiangxi	Efm55	<i>E. faecium</i>	$\geq 4.5 \times 10^9$ CFU/g	Livestock
49	Jiangxi	Efm56	<i>E. faecium</i>	$\geq 4.5 \times 10^9$ CFU/g	Livestock
50	Shandong	Efm57	<i>E. faecium</i>	$\geq 1 \times 10^{10}$ CFU/g	Livestock
51	Henan	Efm58	<i>E. faecium</i>	$\geq 1 \times 10^6$ CFU/g	Livestock
51	Henan	Efm59	<i>E. faecium</i>	$\geq 1 \times 10^6$ CFU/g	Livestock
52	Henan	Efm60	<i>E. faecium</i>	$\geq 1 \times 10^6$ CFU/g	Livestock
52	Henan	Efm61	<i>E. faecium</i>	$\geq 1 \times 10^6$ CFU/g	Livestock
52	Henan	Efm62	<i>E. faecium</i>	$\geq 1 \times 10^6$ CFU/g	Livestock
53	Henan	Efm63	<i>E. faecium</i>	100 billion/g	Livestock
53	Henan	Efm64	<i>E. faecium</i>	100 billion/g	Livestock
54	Henan	Efm65	<i>E. faecium</i>	Unknown	Aquaculture
54	Henan	Efm66	<i>E. faecium</i>	Unknown	Aquaculture
55	Henan	Efm67	<i>E. faecium</i>	Unknown	Livestock
55	Henan	Efm68	<i>E. faecium</i>	Unknown	Livestock
56	Henan	Efm69	<i>E. faecium</i>	Unknown	Aquaculture
57	Henan	Efm70	<i>E. faecium</i>	Unknown	Livestock
58	Henan	Efm71	<i>E. faecium</i>	Unknown	Aquaculture

58	Henan	Efm72	<i>E. faecium</i>	Unknown	Aquaculture
59	Henan	Efm73	<i>E. faecium</i>	≥10 billion/g	Livestock
59	Henan	Efm74	<i>E. faecium</i>	≥10 billion/g	Livestock
60	Henan	Efm75	<i>E. faecium</i>	≥10 billion/g	Livestock
60	Henan	Efm76	<i>E. faecium</i>	≥10 billion/g	Livestock
61	Henan	Efm77	<i>E. faecium</i>	≥10 billion/g	Livestock
62	Henan	Efm78	<i>E. faecium</i>	≥10 billion/g	Livestock
63	Jiangsu	Efm79	<i>E. faecium</i>	Unknown	Livestock
64	Henan	Efm80	<i>E. faecium</i>	Unknown	Aquaculture
65	Henan	Efm81	<i>E. faecium</i>	Unknown	Livestock
66	Henan	Efm82	<i>E. faecium</i>	Unknown	Aquaculture
67	Henan	Efm83	<i>E. faecium</i>	≥100 million/g	Human
68	Jiangsu	Efm84	<i>E. faecium</i>	Unknown	Livestock
69	Jiangsu	Efm85	<i>E. faecium</i>	Unknown	Livestock
70	Zhejiang	Efs1	<i>E. faecalis</i>	≥1×10 <sup>6</sup> CFU/g	Human
71	Japan	Efs2	<i>E. faecalis</i>	Unknown	Human
72	Shanghai	Efs3	<i>E. faecalis</i>	Unknown	Human

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Note: The same code of product trade means that strains are isolated from the same probiotic product.