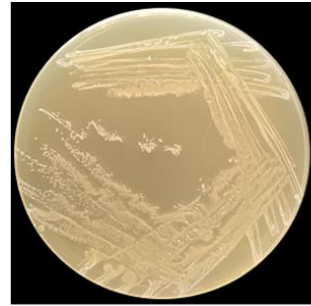
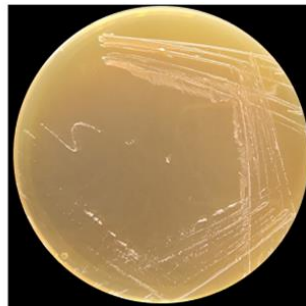




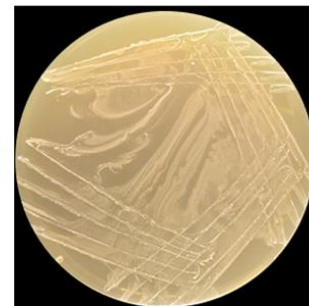
**Fermented soybean
paste (2 year)**



So001



So002



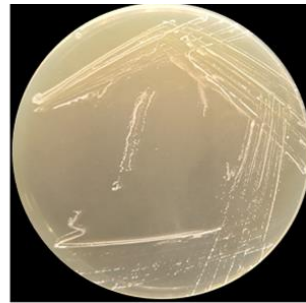
So003



So004



So005



So008



So009



So010

Figure S1. The plate image of isolated of probiotics from Korean fermented soybean paste.

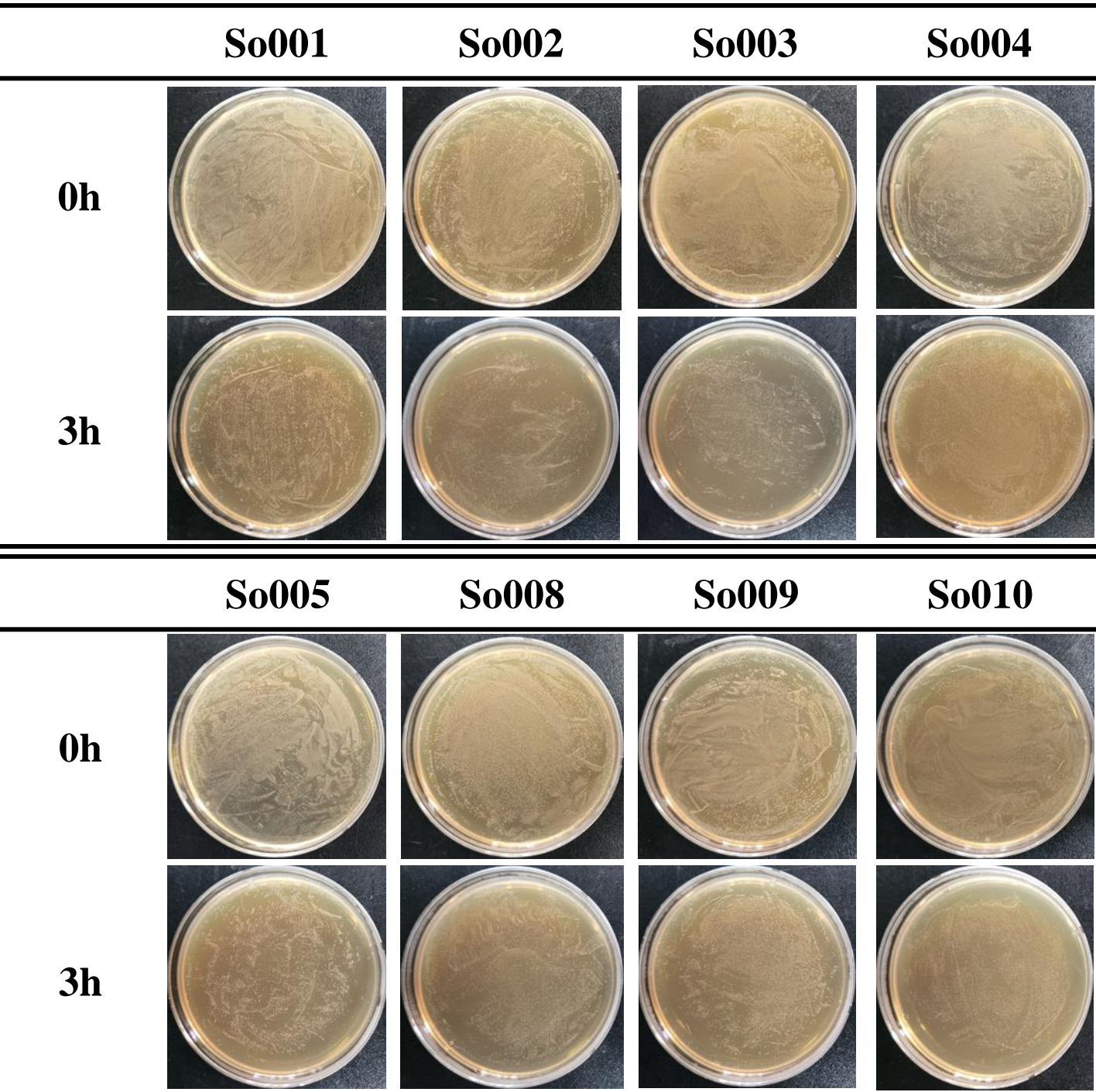


Figure S2. The plate picture of isolates before and after exposed to low pH environment.

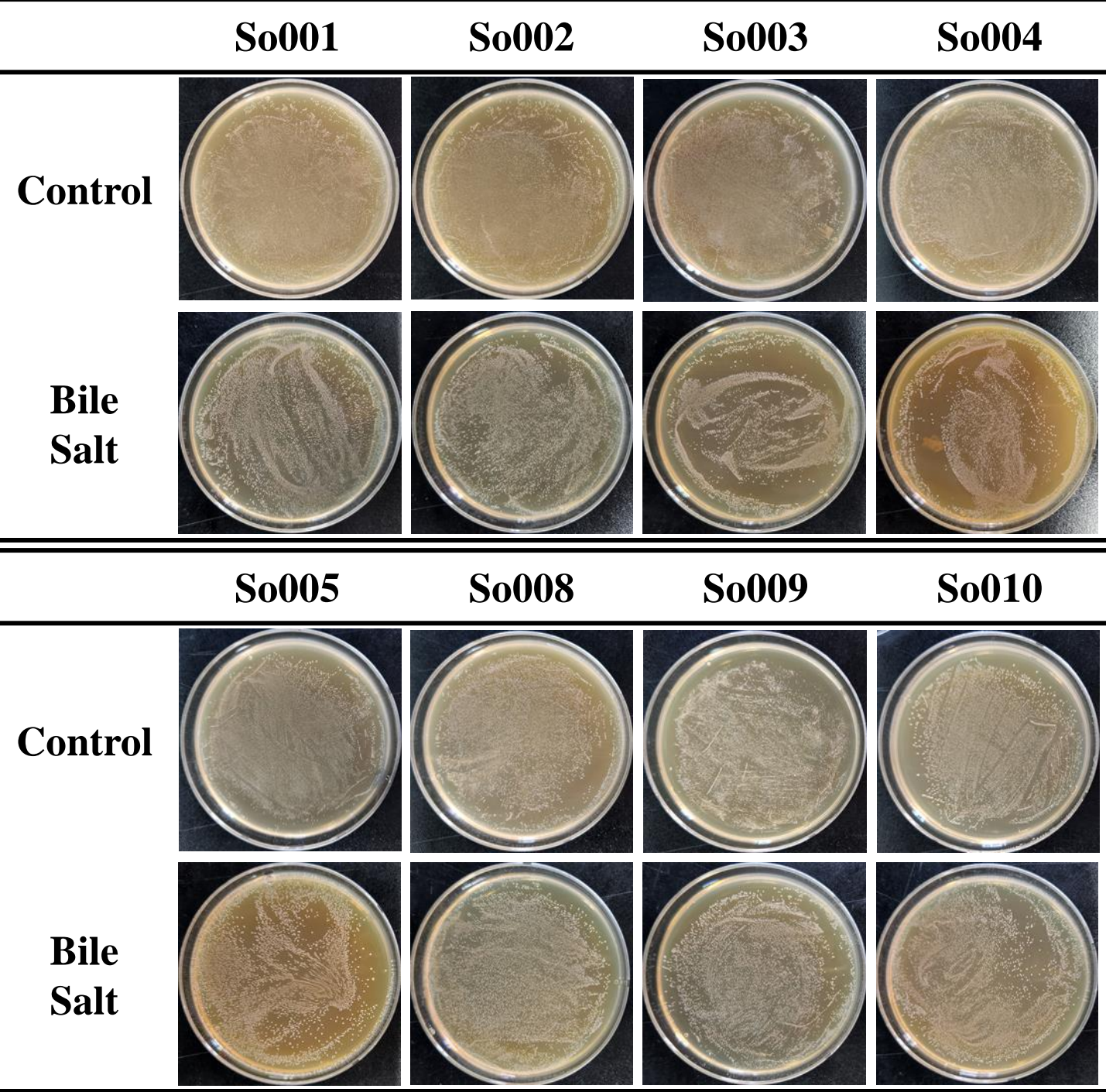


Figure S3. The plate picture of isolates before and after exposed to bile salt environment.

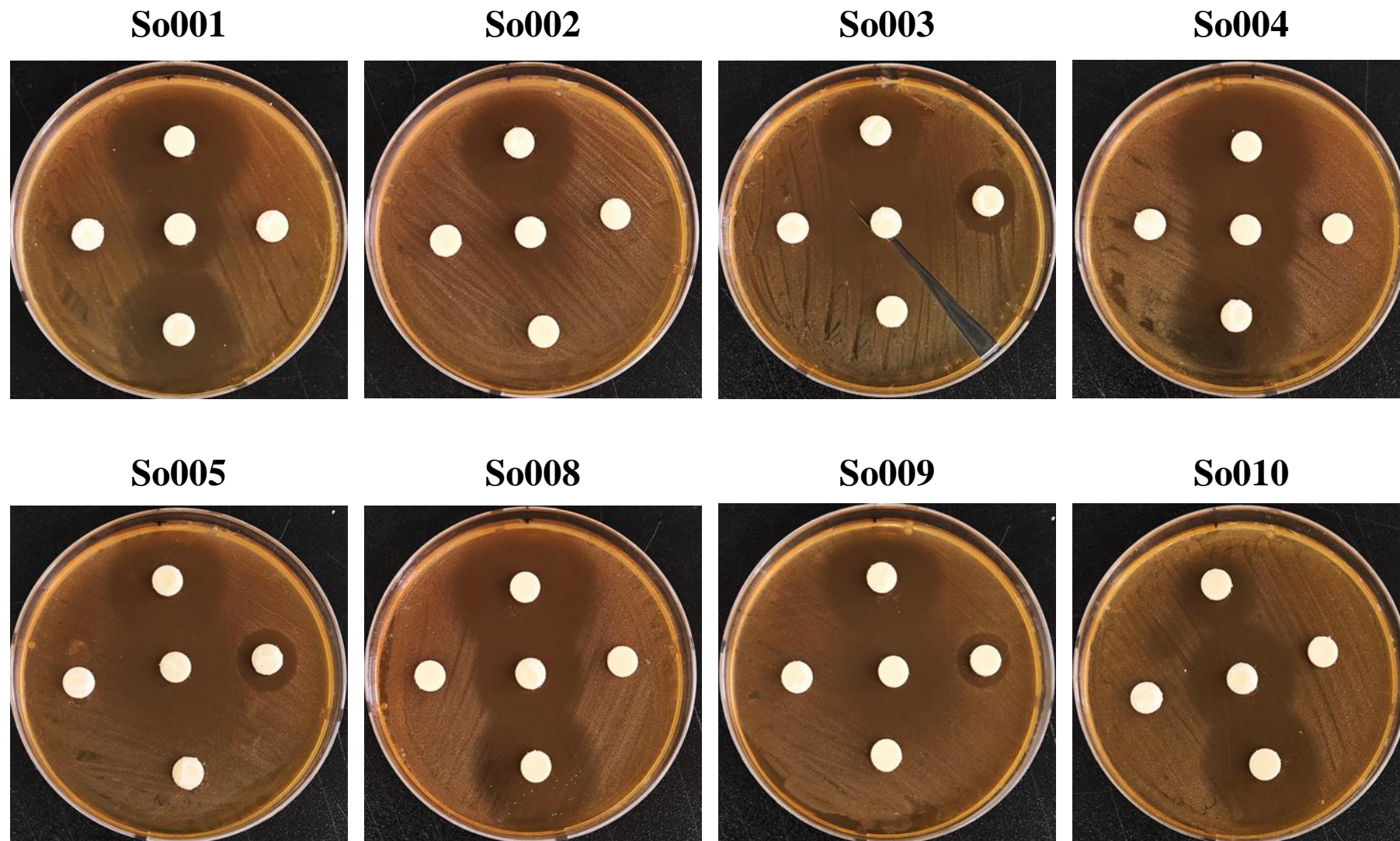


Figure S4. Antibiotic susceptibility assay a-TCH (Tetracycline, 30 $\mu\text{g/mL}$), b-VAN (Vancomycin, 30 $\mu\text{g/mL}$), c-Ery (Erythromycin, 15 $\mu\text{g/mL}$), d-GEN (Gentamycin, 10 $\mu\text{g/mL}$), e-Amp (Ampicillin, 10 $\mu\text{g/mL}$).

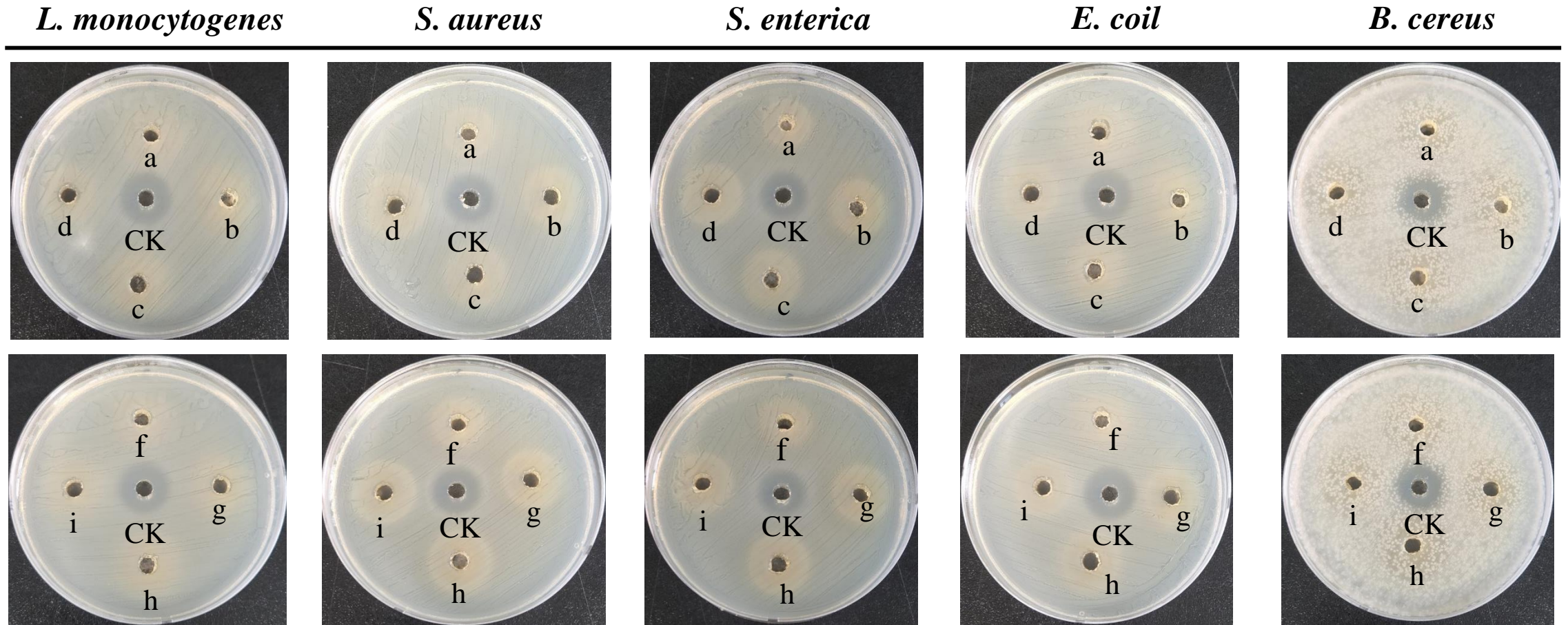


Figure S5. Antibacterial activity of cell free supernatant adjusted to pH 6.5. a-So1, b-So2, c-So3, d-So4, f-So5, g-So8, h-So9, i-So10, CK-TCH (50 µg/mL).

Table S1. Antibacterial activity of cell free supernatant of *E. faecium strains*. +++ = zone dia > 15 mm, ++ = zone dia >10-15mm, + = zone dia > 5-10 mm, and - =no zone of inhibition.

Isolates	Zone of inhibition									
	<i>S. entrica</i>		<i>E. coli</i>		<i>B. cereus</i>		<i>S. aureus</i>		<i>L. monocytogenes</i>	
	CFS	nCFS	CFS	nCFS	CFS	nCFS	CFS	nCFS	CFS	nCFS
<i>E. faecium</i> So001	++	-	++	+	++	-	++	+	++	-
<i>E. faecium</i> So002	+	-	+	-	-	-	+	-	+	-
<i>E. faecium</i> So003	++	-	+	+	-	-	++	-	++	-
<i>E. faecium</i> So004	++	+	++	+	+	-	++	+	+++	+
<i>E. faecium</i> So005	-	-	+	+	-	-	+	-	++	+
<i>E. faecium</i> So008	+	-	++	+	++	-	++	-	++	+
<i>E. faecium</i> So009	-	-	-	-	+	-	+	-	+	-
<i>E. faecium</i> So010	+	-	++	+	+	-	++	-	+++	+