Purified acidic sophorolipid biosurfactants in skincare applications: an assessment of cytotoxic effects in comparison with synthetic surfactants using 3D in-vitro human skin model

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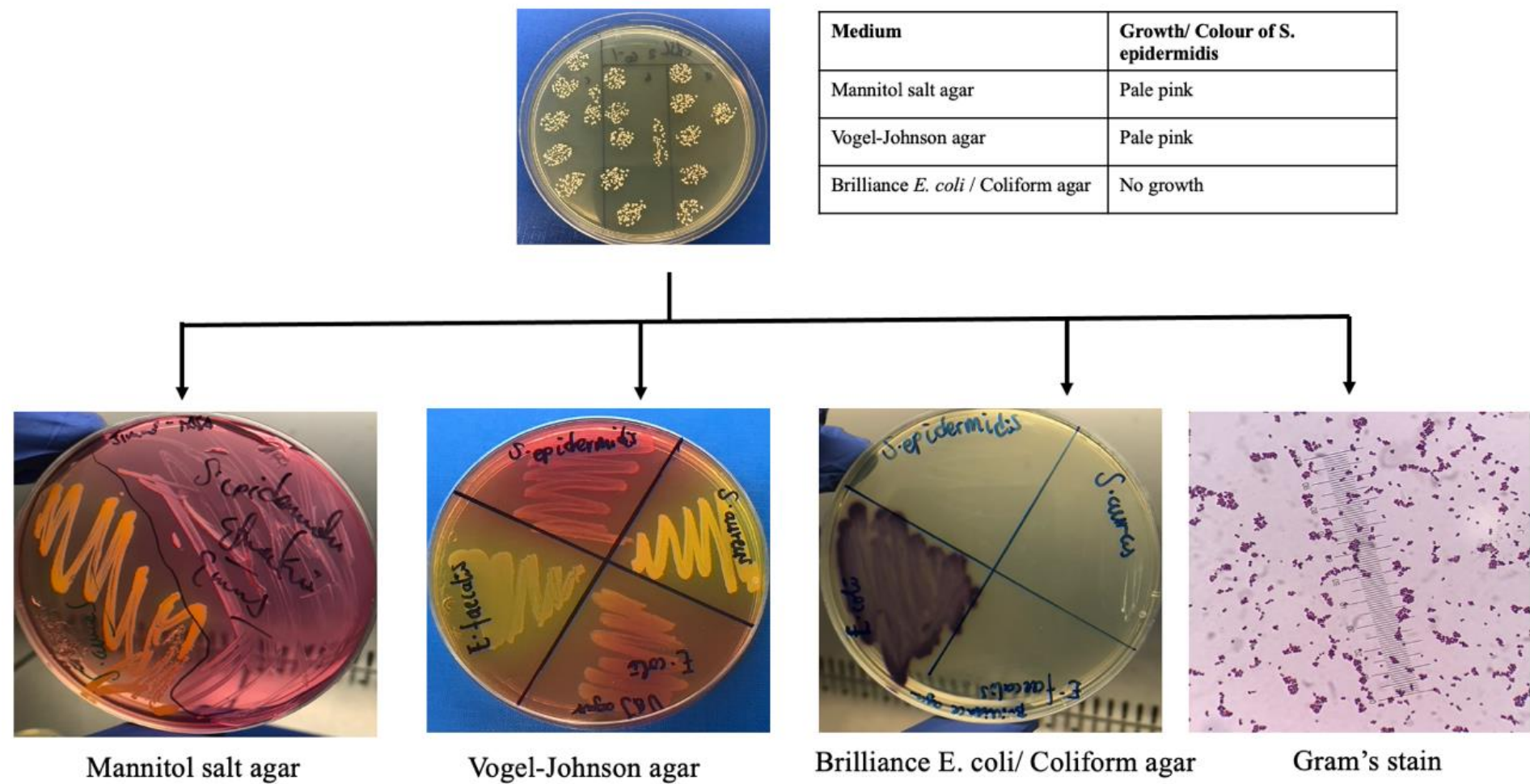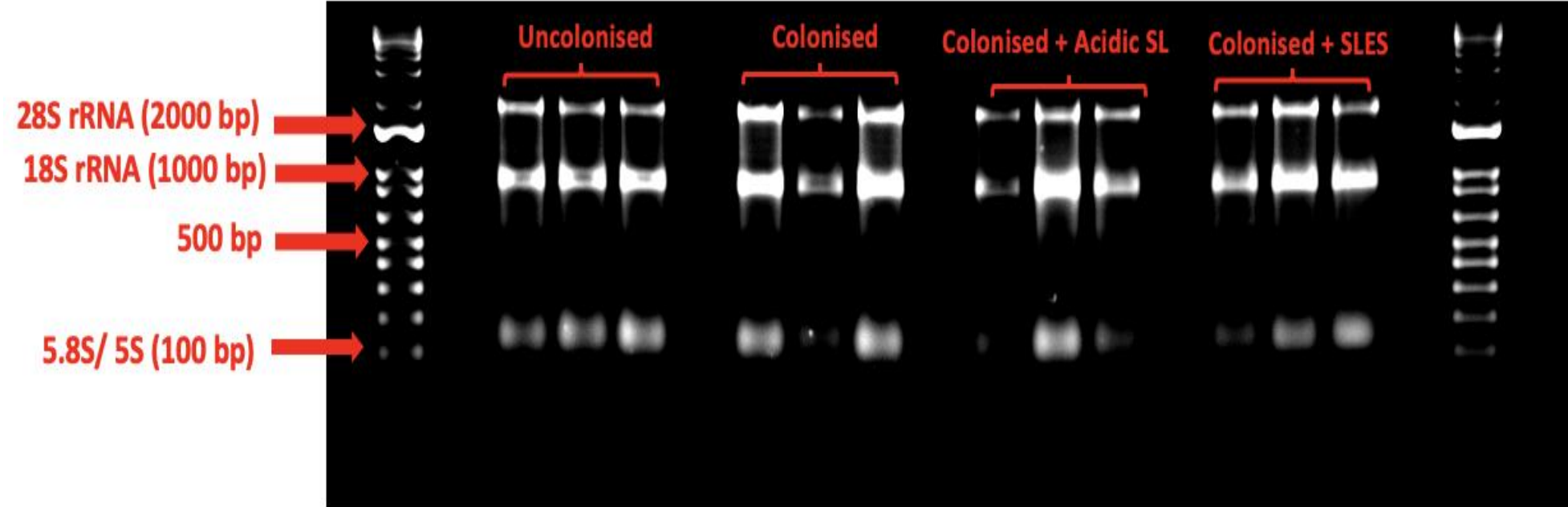
Supplementary figures

Figure S1

Medium	Growth/ Colour of S. epidermidis
Mannitol salt agar	Pale pink
Vogel-Johnson agar	Pale pink
Brilliance *E. coli* / Coliform agar	No growth

Mannitol salt agar   Vogel-Johnson agar   Brilliance E. coli/ Coliform agar   Gram's stain

Figure S2

Figure S3

Figure S4

β-actin

$y = -3.6973x + 17.711$
$R^2 = 0.9989$

X = log (x) cDNA dilution

Average Cq values

Primer efficiency: 86.4 %

CXCL8

$y = -3.5204x + 24.589$
$R^2 = 0.9905$

X = Log (x) cDNA dilution

Average Cq values

Primer efficiency : 92.3 %

IL-6

$y = -3.5576x + 22.988$
$R^2 = 0.9994$

X = Log (x) cDNA dilution

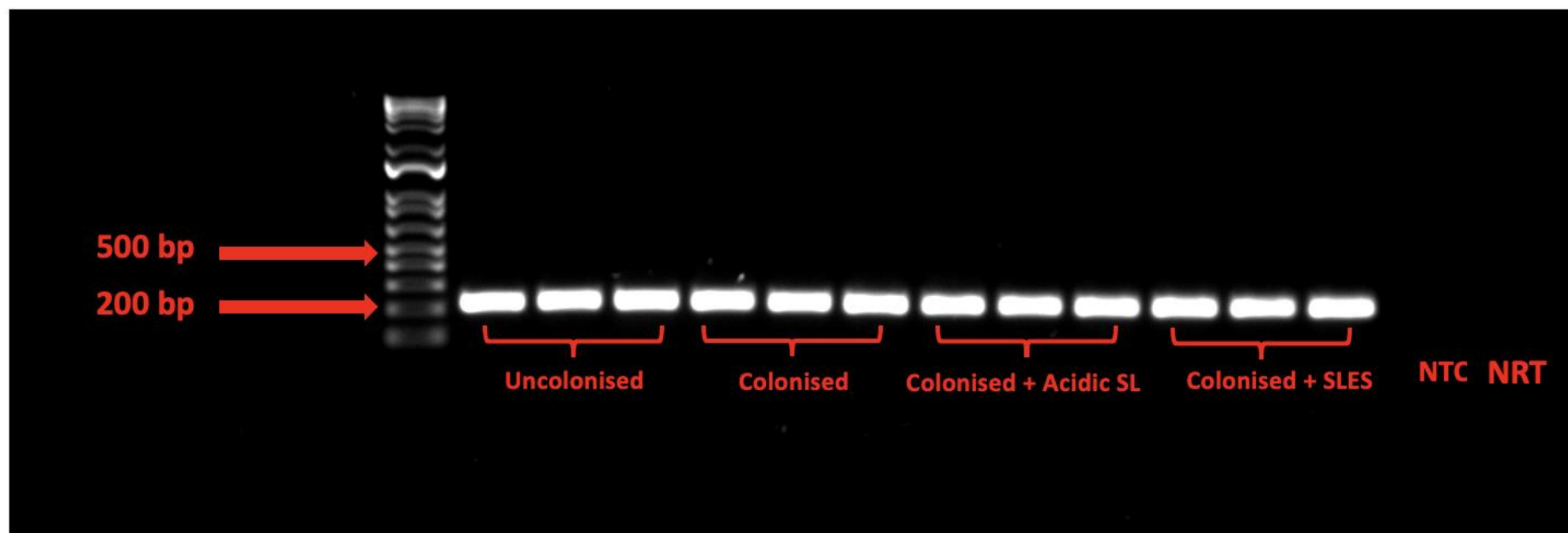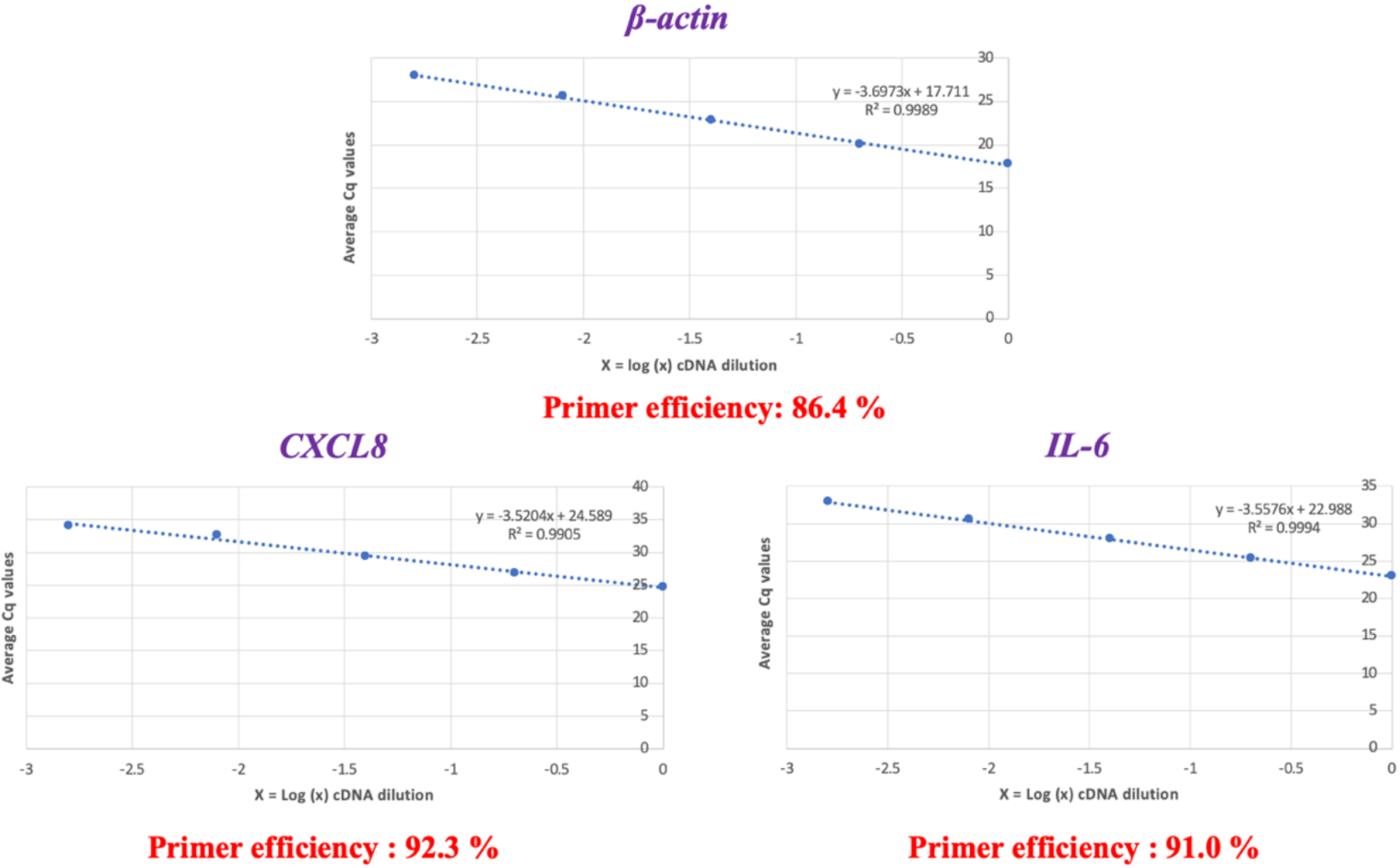Average Cq values

Primer efficiency : 91.0 %

Supplementary figure legends

Figure S1

Phenotypic characterisation of sampled *S. epidermidis* colonised on Labskin^{TM} surface using Gram's staining and differential/ selective media

Figure S2

Gel electrophoretic analysis of total RNA extracted from Labskin^{TM}

Figure S3

Gel electrophoretic analysis of cDNA synthesised from total RNA extracted from Labskin^{TM}. The amplicon size of all PCR products was approximately 200 bp, which corresponds to the expected amplicon size of the *B-actin* primer set designed for the qPCR as a reference gene. NRT and NTC represent Reverse Transcriptase minus and No Template negative control, respectively.

Figure S4

Standard curves and primer efficiencies of primer sets utilised in qPCR analysis

Supplementary tables

Table S1

Primer	Gene	Sequence (5' – 3')	Amplicon Length (bp)	Annealing Temperature (°C)
IL-8 SA-F	*CXCL8*	ACA CTG CGC CAA CAC AGA AA	117	47
IL-8 SA-R	*CXCL8*	TTC TCA GCC CTC TTC AAA AAC TTC	117	49
IL-6 SA-F	*1L-6*	AGC CAG AGC TGT GCA GAT GA	110	49
IL-6 SA-R	*IL-6*	GCA GGC TGG CAT TTG TGG TT	103	51
B-actin EST- F	*B-actin*	CATCCGCAAAGACCTGTACG	200	49
B- actin EST-R	*B-actin*	CCTGCTTGCTGATCCACATC	200	49

Table S1

Sequence of primer sets and product size of pro-inflammatory markers utilised in endpoint PCR and qPCR analyses. Primers were designed using the NCBI Primer-BLAST software and sequences of primers were