

The Potent Gut Stabilizer

Prome-BS is a proprietary strain of *Bacillus subtilis* 144 BS, tested & proven against AMR. **Prome-BS** is a sporulating, viable, non-hemolytic, non-GMO and thermostable to be used as feed additive for balanced intestinal microbial flora & improved body weight gain in poultry

Properties of Bacillus subtilis (SAN 144 BS):

- *Bacillus subtilis* (SAN 144 BS) is an Gram Positive Aerobic Probiotic
 - a. Highly effective in the foregut
- *Bacillus subtilis* (SAN 144 BS) is also a Facultative Anaerobic Probiotic growing under strict anaerobic conditions using nitrate as an electron acceptor
 - a. Effective in the mid & hind Gut



Antimicrobial Resistant Gene Detection

Bacillus subtilis SAN 144 BS has been tested and proven against AMR for a wide range of antibiotics

รับงานผลิตโดย Siriraj
งานพัฒนาและสร้างประโยชน์จากงานวิจัยและเทคโนโลยี
ด้านวิจัย สำนักงานคณะบดี คณะแพทยศาสตร์ศิริราชพยาบาล
มหาวิทยาลัยมหิดล โทร.0-24192995-7 โทรสาร.0-24183307
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Antimicrobial Resistant Gene Detection Report

Date: 04.02.2020

Name & Address of customer	Sanzyme Biologics Plot No. 13, Sugar Society, Road No.2, Banjara Hills, Hyderabad-500 034		
Sample ID / type	<i>Bacillus subtilis</i> San144BS		
Date of sample receipt	22-01-2020	Method of test	Real-time PCR with specific probes
Date of sample testing	23-01-2020 to 03-02-2020	Condition of sample when receive	O.K.

Results

	Antimicrobial classes	Target gene	Results		Antimicrobial classes	Target gene	Results
1	β-lactams (penicillin, amoxicillin, cephalosporin)	CTX-M1	NF	27	Polymyxins	<i>mcr-1</i>	NF
2		CTX-M2-M74	NF	28		<i>mcr-2</i>	NF
3		CTX-M8-M25	NF	29	Tetracyclines	<i>tetA</i>	NF
4		CTX-M9	NF	30		<i>tetB</i>	NF
5		PER	NF	31	Phenicolts	<i>cmIA</i>	NF
6		VEB	NF	32		<i>floR</i>	NF
7		CMY1-MOX	NF	33		<i>catA1</i>	NF
8		CMY2-LAT	NF	34		<i>catB3</i>	NF
9		DHA	NF	35	Aminoglycosides	<i>aacC1</i>	NF
10		FOX	NF	36		<i>aacC2</i>	NF
11		ACT-MIR	NF	37		<i>aacC4</i>	NF
12		OXA-1	NF	38		<i>aphA1</i>	NF
13		OXA-9	NF	39		<i>aphA6</i>	NF
14	Carbapenems	KPC	NF	40		<i>aadA1-2-17</i>	NF
15		GES	NF	41		<i>aadB</i>	NF
16		NDM	NF	42	<i>armA</i>	NF	
17		VIM	NF	43	<i>rmtB</i>	NF	
18		IMP	NF	44	Macrolides	<i>ermB</i>	NF
19	OXA-48	NF	45	<i>mphA</i>		NF	
20	Folate pathway inhibitors	<i>sul1</i>	NF	46	Quinolones	<i>qnrA</i>	NF
21		<i>sul2</i>	NF	47		<i>qnrS</i>	NF
22		<i>sul3</i>	NF	48		<i>qnrB1</i>	NF
23		<i>dfra1</i>	NF	49		<i>qnrB4</i>	NF
24		<i>dfra5-14</i>	NF	50		<i>QepA</i>	NF
25		<i>dfra12</i>	NF				
26		<i>dfra17</i>	NF				

~ 3-8 X10⁶ cells was tested. Positive grading criteria: 1+ = 10¹-10², 2+ = 10²-10³ and 3+ = >10³ positive cells NF = Not found

Tested person: *Fattappa Chinli*
(Ms. Fattappa Chinli)

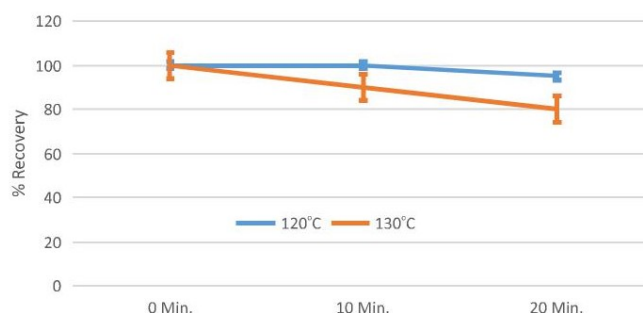
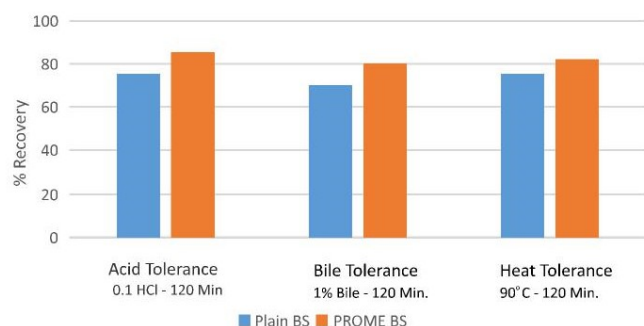
Authorized person: *Suporn Foongladda*
(Assoc.Prof.Dr. Suporn Foongladda)

Tel: 02-4199811, 0819390258 e-mail: suporn.foongladda@mahidol.ac.th



INVITRO STUDIES

Stability & Compatibility of Prome-BS:



1. Prome-BS has superior

- a. Acid tolerance (18%)
- b. Bile tolerance (16%)
- c. Heat tolerance (9%)

2. Prome-BS has Proven

- a. Thermostability upto 130°C

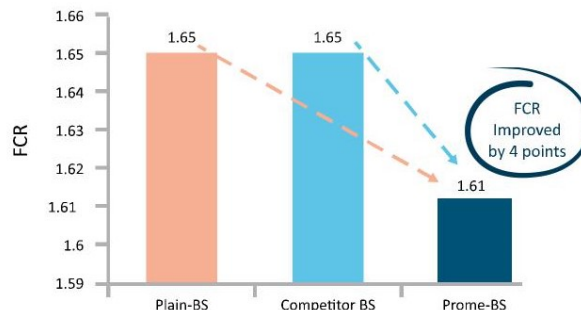
INVIVO STUDIES / FIELD TRIALS

Comparative field trial data of **Prome-BS** vs. Competitor BS vs. Plain BS as generated from a Broiler Farm

1. The effect of **Prome-BS** vs Competitor BS/Plain-BS on 42 days of broiler growth performance

Treatment	Plain-BS	Competitor BS	Prome-BS
Feed intake (g/bird)	3706	3677	3702
Body weight (g/bird)	2246	2230	2297
FCR	1.65	1.65	1.61
Mortality (%)	0.5	1	0.5

2. Improvement in FCR after addition of **Prome-BS** to broiler diet



Conclusions form Field Trials:

1. **Prome-BS** Increases Body Weight Gain by 51g and 67g respectively compared to Plain-BS & Competitor-BS
2. **Prome-BS** Significantly Improves FCR by 4 points

Mechanism of Action:

- ➔ **Prome-BS** containing *Bacillus subtilis* (SAN 144BS) is an Aerobe & Facultative Anaerobe with spores surviving low pH & bile conditions in the gut
- ➔ **Prome-BS** consumes oxygen which results in positive environment for growth of native probiotic pool of the gut
- ➔ **Prome-BS** produces enzymes like Lipases, Amylases, Proteases, etc. which improves digestibility & energy conversion of the feed
- ➔ **Prome-BS** Prevents the Pathogenic Growth by producing Subtilisin, Short Chain Fatty Acids (SCFA) & Surfactin



Key Benefits:

- **Prome-BS** Promotes & Modulates Healthy Gut Microflora
- **Prome-BS** Enhances Digestibility & Nutrient Absorption
- **Prome-BS** Produces Volatile Fatty Acids & other Metabolites with proven action against *Clostridium perfringens*, *Salmonella enteritidis* & *E.coli*
- **Prome-BS** Competitively Excludes Pathogenic Microbes from the Gut & Prevents Infection
- **Prome-BS** Promotes Immune Response
- **Prome-BS** Improves Liveability and FCR
- **Prome-BS** Ensures Higher ROI with continuous usage



Prome-BS contains Proprietary AMR Free Strain of *Bacillus subtilis* SAN 144 BS compatible with Antibiotics / Feed Additives / Acidifiers / Enzymes / Minerals / Disinfectants

Available as both
FEED ADDITIVE & WATER SOLUBLE in

- 100 Million CFU/g,
- 1 Billion CFU/g,
- 4 Billion CFU/g,
- 10 Billion CFU/g
& Customized Potencies

Suggested Feeding / Inclusion Rate:

Feed

- **Prome-BS 100M** (FS) @ 500g – 1000g / MT
- **Prome-BS 1B** (FS) @ 100g – 200g / MT
- **Prome-BS 4B** (FS) @ 50g – 100g / MT
- **Prome-BS 10B** (FS) @ 20g – 40g / MT

Drinking Water

- **Prome-BS100M** (WS) @ 200g – 400g / 1000 Lit
- **Prome-BS 1B** (WS) @ 50g – 100g / 1000 Lit
- **Prome-BS 4B** (WS) @ 20g – 50g / 1000 Lit
- **Prome-BS 10B** (WS) @ 10g – 20g / 1000 Lit

Physical appearance: Free flowing, off white colour powder

Storage: Store in cool & dry conditions protect from direct sunlight

Shelf life: Best before 36 months from the month of manufacture

Packing: Available in 25kg & customized packs

