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ABBREVIATIONS AND SYMBOLS

Abbreviations or symbols	Term
-	and
%	percent
=	is equal to
<	is less than
>	is greater than
μ	micron
°C	degree centigrade or Celsius
μg	microgram
μl	microliter
/	per
+	plus
3,4 DCI	3,4-dichloroisocoumarin
ADFI	average daily feed intake
ADG	average daily gain
AME	apparent metabolizable energy
ANFs	anti-nutritional factors
ANOVA	analysis of variance
AOAC	Association of Official and Analytical Chemists
APD	apparent protein digestibility
ATCC	American Type Culture Collection
BIOTEC	National center for Genetic Engineering and Biotechnology
BPN9	bacterial protease Nagase
BUN	blood urea nitrogen
C	carbon

CAFOs	concentrated animal feeding operations
CCK	cholecystokinin
CF	crude fibre
CFU	colony-forming units
cm	centimeters
Co., Ltd.	Company Limited
CO ₂	carbon dioxide gas
Con	control
CP	crude protein
CRD	completely randomized design
CWA	The Clean Water Act
CZMA	The Coastal Zone Management Act
DAN	diazoacetyl-DL-norleucine methyl ester
df	degrees of freedom
DFP	diisopropylfluorophosphate
DM	dry matter
DMEM	Dulbecco's Modified Eagle's Medium
DMSO	dimethyl sulfoxide
DNS	dinitrosalicylic acid
e.g.	exempli gratia (for example)
E-64	<i>L-trans</i> -3-carboxyoxiran-2-carbonyl-L-leucylagmatine
ed., eds.	editor (s)
EDTA	ethylene diamine tetraacetic acid
EE	ether extract
EGTA	ethylene glycol-bis(2-aminoethyl)-N,N,N',N'-tetraacetic acid
EPNE	1,2-epoxy-3-(p-nitrophenoxy)propane
<i>et al.</i>	<i>et alia</i> (Latin), and other(s)
F	F values
FAS001 1.0X	crude protease from <i>Bacillus</i> sp. FAS001 (same protease activity as import enzyme1)

FAS001 1.5X	crude protease from <i>Bacillus</i> sp. FAS001 (1.5 times protease activity of import enzyme1)
FCR	feed conversion ratio
FTU	phytase unit
g	gram
GLM	the general linear model procedure
h	hour
IE1	import Enzyme 1
IE2	import Enzyme 2 (same protease activity as import enzyme1)
kDa	kilo dalton
kg	kilogram
L	liter
LF	liquid fermentation
m	meter
M	molar
mg	milligram
min.	minute
MJ	mega joule
ml	milliliter
mm	millimeter
MS	mean square
MTT	3-(4,5-dimethylthiazoyl-2-yl) 2,5 diphenyltetrazolium bromide
n	nano
N	nitrogen
NA	nutrient agar
NB	nutrient broth
ND	not determined
NDF	Neutral detergent fibre
NFE	nitrogen free extract
NRC	National Research Council
NSP	non starch polysaccharide

NSTDA	National Science and Technology Development Agency
O ₂	oxygen gas
OD	optical density
P	Probability
PCMB	p-chloromercuribenzoate
pH	negative logarithm of hydrogen ion activity
PMF	phenylmethanesulfonyl fluoride
ppm	parts per million
Psi	pounds per square inch
rpm	rounds per minute
S.D.	standard deviation
SBM	soybean meal
SBTI	soybean trypsin inhibitor
Sig.	significant level
SP	storage proteins
sp., spp.	species
SPI	soy protein isolate
SPSS	the Statistical Package for Social Science
SS	sum of square
SSF	solid state fermentation
TCA	trichloroacetic acid
TKN	total kjeldahl nitrogen
TLCK	tosyl-L-lysine chloromethyl ketone
TSB	tryptic soy broth
UK.	United Kingdom
USA.	The United States of America
v/v	volume by volume
v/w	volume by weight
VMPs	vegetable proteins meals
w/v	weight by volume
w/w	weight by weight
Zn	zinc