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## List of Abbreviations

BLAST	basic local alignment search tool
bp	base pairs
CLSM	confocal laser scanning microscope
COD	chemical oxygen demand
Cy3	indocarbocyanine
Cy5	indodicarbocyanine
DAPI	4,6-diamino-2-phenylindole
DNA	deoxyribonucleic acid
EDTA	ethylenediaminetetra-acetic acid
EtBr	ethidium bromide
FISH	fluorescent <i>in situ</i> hybridization
FLUOS/FITC	5(6)-carboxyfluoroscein-N-hydroxysuccinamide ester
h	hour
HGCGPB	high mol% G+C Gram positive bacteria
HNOBSBR	high nitrite oxidizing bacteria sequencing batch reactor
HRT	hydraulic retention time
IPTG	isopropyl- $\beta$ -D-thiogalactopyronoside
kb	kilo base pair
LB	Luria-Bertani
LGCGPB	low mol% G+C Gram positive bacteria
LNOBSBR	low nitrite oxidizing bacteria sequencing batch reactor
min	minute
MLSS	mixed liquor suspended solids
MLVSS	mixed liquor volatile suspended solids
MQ	milli-Q water
OTU	operational taxonomic group
PBS	phosphate buffered saline
PCR	polymerase chain reaction

### List of Abbreviations (continued)

NH <sub>4</sub> -N	nitrogen content of ammonia
NFSBR	nitrifying bacteria sequencing batch reactor
NO <sub>2</sub> -N	nitrogen content of nitrite
NO <sub>3</sub> -N	nitrogen content of nitrate
REA	restriction enzyme analysis
rDNA	ribosomal deoxyribonucleic acid
rRNA	ribosomal ribonucleic acid
SBR	sequencing batch reactor
SDS	sodium dodecyl sulphate
SRT	sludge retention time
sec	second
TAE	tris/acetic acid/EDTA electrophoresis buffer
Vol	volume
X-gal	5-bromo-4-chloro-3-indolyl-β-D-thiogalactopyranoside