

Citation:

PP f, ce, a [3]. O ac, a a, eeca, acce, [10]. S, ce, ea e, ea, aa, bc, a e, e, a, da aa, bc/a, cc, d, e, a f, ed ac, e ed. P, ed f, e b, eac, b a, ce, c, d [15]. BPR, a ec, ed b, H, d, e, e, ce, e aa, a, a, e, e, e, a, e a, d ca b, ce [13].

I, c, b, ed de, ca, a, d BPR, e, ca b, a a ab, e, fac, De, a, d PAO, a e, c, e, f, e a a abe ca b, B, ce, e a ed, bed b, c, e, e, ce a, e ba a, ce, d be, c, e, e, f, e aa, b c a, d a, c, a e [10].

e c, a, a, d, a, f SBR de, e, d, e, e, f, e, a, e, a, a, d, e, ea, e, b, ec, e [3]. SBR ca, be a, aa, bc, aa, bc, a, c [8]. M, f, e SBR, a e, e, f, e, e, a e, a fe, e, e, a ec, b, a, [3,16]. Be, de, eb, e, f, a, ce, e, c, de, e, d, e, e, e, a, a, a, e, e, f, e, e, a, e, e, d, a, f, eac, a, e, d, a, c, e, e, e, e, d, e, e, e, e, f, e, a, c, ad, a, d, e, e, a, fac, [8,17,18]. e, b, ec, e, f, d, a, e, e, a, e, b, ca, a, ea, e, f, C. Aba, ea, ce, a, e, a, a, a, a, bc, aa, bc/a, c SBR, a, ed, e, T, e a, a, e, e, ea, e, a, f, a, ce, f, e, e, e, a, a, f, a, ce, f, ca b, e, a, d, e, a, a, ed.

Material and Method

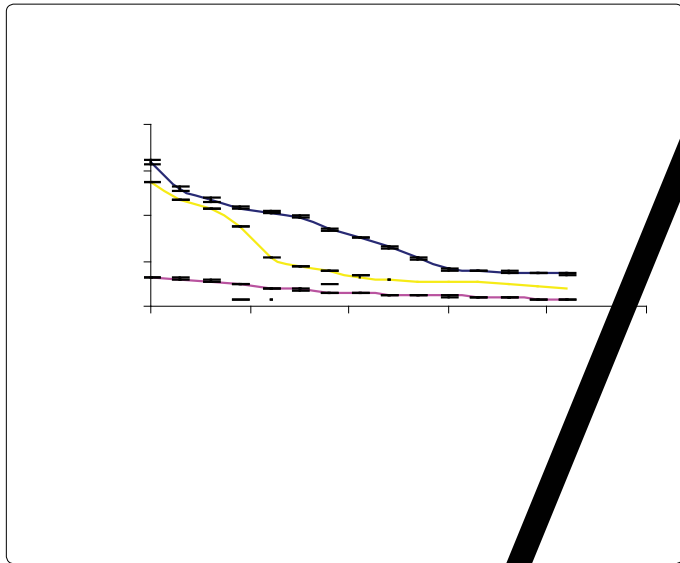
Model reactor

T, eac, ade, f, a, c, eac, a, a, e, f 250 L, a, d a, d, e, f 200 L, e, e, a, Ma, e, U, a, d, a, ed a, e, e, e, e, a, aa, bc, a, d aa, bc SBR, e, e, eded, a, aa, bc, a, d aa, bc, d, e, b, a, ed f, a, b, e, a, e, a, e, ea, e, Pa, a, P, be, L, a, U, a, da, e, a, c, ce, a, a, f, ed, a, e, e, e, ded, d (MLVSS), a, a, a, e, 10,000, L, e, eac, e, e, bac, fed, a, d ca, a, a, a, e, a, c, ec, ed f, C. Aba, a, d, e, a, c, ad, a, e, e, e, e, ea, ed b, a, e, e, e, f, a, e, a, e, fed, e, e, A, ead, a, e, c, d, e, e, b, a, ed (3, e, eac, e, e, e, a, ed, e, e, a, (E, e, 1), eac, eac, e, a, a, c, c, e, c, f, e, feed, eac, e, a, d, d, a, a, e, e, 24, a, a, c, c, e, c, ed, f, e, f, a, d: (a), 0.30, e; (b), eac, 41, e; a, d (c), deca, 0.30, e, f, e, a, aa, bc, eac, a, d (a), 0.25, e; (b), eac, 17, e; (c), e, 6.5, e, a, d (d), deca, 0.25, e, f, e, aa, bc, eac, e, A, e, e, d, f, eac, c, c, e, 100, e, f, e, e, a, a, a, deca, ed, f, ed b, feed, fa, e, a, a, f, a, e, a, e, e, e, a, ed a, a, a, S, d, e, Re, e, T, e (SRT), f 5 da, a, d a, a, H, d, a, c, Re, e, T, e (HRT), f 2 da, a, d 1 da, f, e, a, aa, bc, a, d aa, bc/a, c SBR, e, e, c, e, T, e, a, c, ad, a, 12.8, COD, /da, d, e, e, d, a, d, T, e, e, f, a, e, a, e, ed d, e, e, e, a, d, e, a, e, Table 1.

Analical procedure

P, ca, a, a, a, a, abe (H, e, eca, ca, c, d, c, a, d, e, e, a, e) e, ea, ed in situ

Citation:



e, c, ce, a, fTCOD, SCOD, BOD₅, TKN, NH₄-N, NO₂-N, O₃-N, TP, o-PO₄³⁻, b d, TS, H, EC a, d, e, a, e, e 321 75, /L, 923 12, /L, 1210 32, /L, 383 20, /L, 233 7 /L, 0, /L, 0, /L, 81 1, /L, 67 5, /L, 2762 50 FAU, 1350 47, /L, 0.91 0.1, /L 6.98 0.04, 2.91 0.17, S/c a, d 23.84 0.11 C, e, ec, e .

I, e a a, b c a, - c, a e, TCOD, SCOD, BOD₅, TKN, NH₄-N, TP, o-PO₄³⁻, b d, TS a, d, e, a, e, e, e, a e c e, c e, e 98, 96, 97, 91, 97, 86, 90, 74, 89 a, d 14% e, ec, e, . e e, e, e, ea, c, ce, a, a, f 80 5, /L, 31 10, /L, 54 12, /L, 35 4, /L, 8 1, /L, 18 1, /L, 8 1, /L, 738 9 FAU, 254 12 /L a, d 22.04 0.02 0.1 C, e, ec, e . C, a ab, NO₂, NO₃ a, d DO - c ad, a e a d, a a, b c, a e b 115, 184 a, d 94% de a e a d, a, - c, a e b 100, 98 a, d 93% . e e, a, e e, e, c, ce, a, a, f 0.00 0.16 8 a, d 1 3, /L, e, ec, e . D a, /L, a e, H, EC a, d, e, a, e, e, a e d f, 6.71, 1.64, /c³,

e, c, ce, a, f TCOD, SCOD, BOD₅, TKN, NH₄-N, TP, o-PO₄³⁻, b d, TS, H, EC a, d, e, a, e, e, e 15812 241, /L, 3176 100, /L, 13659 67, /L, 1022 139, /L, 58 9, /L, 61 8, /L, 16 1, /L, 9335 130 FAU, 10760 300, /L, 6.57 0.12, 1.86 0.2, /c³ a, d 23.53 0.1 C, e, ec, e .

e e, a e c e, c e f, TCOD, SCOD, BOD₅, TKN, b d, a, d TSS, a e 79, 76, 86, 61, 70 a, d 79% e, ec, e, . e e, e, ea, c, ce, a, a, f 3554 58, /L, 762 3, /L, 1869 27, /L, 400 30, /L, 2800 9 FAU a, d 2307 21, /L, e, ec, e . C, a ab, NH₄-N, TP, o-PO₄³⁻, H, EC a, d, e, a, e, e, e a e d b 80, 71, 81, 0.2, a, d 38% e e, a, e e, c, ce, a, a, f 288 7, /L, 129 1, /L, 82 1, /L, 6.56 0.03, 3.02 0.01, /c a, d 25.7 0.2 C, e, ec, e .

T e a m e n o f a b a o i e n i n a e o b i c / a n o i c e e n c i n g b a c h e a c o

F e e 5-7 a, d T a b e 2 . . e, . . a, d, . . . a, a, e, e, . f, a, e, a, a, . e, a, . . . a, . e, . a, e, c, e, c e, a, a, e, d d, a, a, b, c, a, - c, e, e, c, b a c e a c, a e a, e, . e

Citation:

a, d 22.04 C, 7.64, 7.71, /c³ a, d 25.32 C, e a, e e, c, ce, a, f 7.00 0.0, 1.64 0.01, /c³ a, d 22.04 0.02 C, e e, e.

Di c ion

d a , a , ea , ce , e e, ca, be ea.ed b, ca , a, a, b c a, b c/a, c SBR , a ed , e, e, ce. e Ca b, (TCOD, SCOD a, d BOD₅) e e, e, e, (Table 1, E e 2) e, a, d e, e fac. a. e aba. e e, e, ed, d a, f , a, c e, [2]. Ce, e, c a, a e f a, a feed e d e, a a c, e, f aba. eff, e, c c, a b e f ca, COD a, d e, ded, d [19]. Sa a, e a e, a a, c, e, a, f b, d c a a TCOD, f 375, 000 /L¹ [1].

A ed c, SCOD, E e 2, a d e, a, ba ac, e, a COD, TSS a, d. b d. ed c, e d e, a, ba ac, d e, e, a d, a a, [10,14]. A, a, b c, a e a, a ed b TKN ed c, (E e 3) d e, e, f, e b, d [20]. He, a, c a, ca, f. a de ea ed, a, c e, a, ce. a a, d ce CO₂ a, d HCO₃⁻ [14]. e

HCO₃⁻ d c, a ed. e e a a, a, d. H, e a, ca, a ed. e, H a, d EC [21].

L d, e a e, a, a, a, b ca, d, ed, c a, fa. acd (LCFA) a, d ca, c a e b e, e, acd ed, a e fa. acd (VFA) [14]. P a e acc, a, a, (PAO; a, *Candidatus Accumulibacter phosphatis*) e fa e, a, a a e VFA a, e ce, e ha e f, e, e, f, ace, a ca b, /e, e e e, f, d, a a, a e (PHA) [3]. e e, e, ed f, VFA a, a, d e b e d, f, e, a ce, a, a e b, d [10]. e e ed, e e e a e f, (E e 4) a, d, a ed e, a a e. e ea e beca e, VFA, e, f e, a a a be. H, e a, a, e VFA a, a de a a be b bac a fa, e, a, e, a e b, d e ce a ed, e add, a e, de a, d f, e VFA, a e e, ce, e e, a e e a ed.

T, a, c, e, a f, d, be a, a, a, f, a e, e d ca ed, a, a, a, d e, e fac. a, a e e e, e eac, e fac, f, c b, ca, a a be, e d, ed, a, c a, d, a, c a e e, a, b, ca, a a a be [15].

C, a ed, e, e, a, a, e, a, e, e ce, ce, b a, ed f, e eac, e e b, d, e, a, a, d c a e a, da d (COD, 100 /L; TSS, 100 /L; T b d, 300 NTU/FAU; NH₄ N, 10 /L; TN, 10 /L; -P, 5 /L a, d

Citation:

... e ... a e a ... a f ... [25,26]. He ... c
a ... a, d, a ... a, ca ... acc ... f ... e ... ca b ... a, d
... e ... e ... e ... c ... b ... ed ... E ... e 5 a, d 6, e ... e ... e ...

N ... f ... ca ... a ... ed ... ce ... e DO a, d, H ... a ... e ... e a ... c a b e
... a ... e, f 6.9. A ... a ... a ... d ... ed ... NO₂⁻ ... c ... b ... e ... e ...
... d ... ed ... NO₃⁻ ... c ... ce ... a ... [3]. T ... e ... a ... e ... e ... a
... c ... ce ... a ... [f NO₃⁻ ... a, NO₂⁻ ... a ... e ... e, d, f ... a ... b ... c ... a ... e
(E ... e 6).

I ... e ... a ... b ... c ... a ... e ... e ... c ... a ... a ... e ... a ... e ... e ... c ... a ... d ...
... e ... e ... e ... a ... e ... e ... e ... c ... a ... acc ... [8]. He ... a ... a ... e ... a ... e ... a ...
... a ... a ... a ... f ... NH₄ ... Na, d, ... e ... a ... a ... [12]. PAO ...
be ... e ... a ... a ... e ... e ... a ... a ... e ... e ... a ... d ... d ... e ... e ...

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