Supplementary

Supplementary information

SI Table 1 Wastewater characteristics as represented in Figure 3

Season	pH		SS		tCOD		sCOD		TKN		TP		Reference
	-		mg/l		mg/l		mg/l		mg/l		mg/l		
	average	range	average	range	average	range	average	range	average	range	average	range	
harvest		4.3-4.6		3490-7660		31369-38391		25403-36698				41-53	[25]
harvest		7.7-7.9		190-367		1900-2070				12.7-18.8		5.6-10.6	[34]
harvest		5.1-6.5		970-28620		4780-22500				2.2-16.1		2-50	[28]
harvest		3-4				800-25000							[26]
harvest	3.9				5530								[21]
harvest	4.9		522		5200				61		25		[43]
harvest		3-4			12975		17500						[37]
			226	213-320		3090-7438		5600-5800		43-57			[18,49]
		3.5-7		26-785		0-14040						3.3-15.5	[14]
		6.5-8.5	320		4728		3898		22		35		[16]

5		3300		14600		12700			[29]
	4-5.7		385-5800		1200-17900			12-93	16-68	[38]
	5.0-6.1		700-3320		10900-14600		10100-12700			[30]
	4-4.99		170-490		3100-27200			21.3-64	16.6-65.7	[22]
			200-1300		800-11000					[80]
3.8		1760		15880				100	52.5	[39]
5.2		1240					25200-28640			[35]
4				4650						[24]
4.1				36100						[31]
3.5				3300						[47]
	4-8		340-2060		1580-10170					[44]
4.8					3647-3799					[33]
		2000			3000-30000				4-35	[79]
			690-722		6800-7100				5-77	[57]

		3.1-3.8		100-500		10700-20000		9200-18100					[40]
		4.0-6.0		200-1300		800-12800							[45]
Season	**pH**		**SS**		**tCOD**		**sCOD**		**TKN**		**TP**		**Reference**
	-		mg/l		mg/l		mg/l		mg/l		mg/l		
	average	range	average	range	average	range	average	range	average	range	average	range	
	5.9												[41]
	5.5		1400		19700								[36]
		4.2-10.1		140-2215		1718-18503						4.2-44.3	[48]
		6-6.2		140-220		3112-3997				67-71		7-8.5	[20]
		4-8											[7]
	3.8		2399		18048						0.8		[27]

SI Table 2 Operational conditions and COD removal of different processes and configuration

Reactor configuration	OLR	HRT	SRT	COD removal	temperature	References
	Kg $m^{-3}d^{-1}$		**d**	**%**	**°C**	
Adavanced aerobic processes						
CASP	0.26	17.5 d	16 d	98%	4-15	[116]
CASP co-treat	0.81	11.7 h	48 d	90%		[70]
	0.52-0.89	10.8 h	25 d	90%		[71]
	1.83	15.6 h	-	88%		[50]
	4.4-6.7	10.8 h	-	87%		[72]
SBR	2-5.2			86-98%		[75]
	0.5-2.5			90-98%		[58]
	0.30	23 d		97%		[23]
	0.80	5 d		93%	22	[43]
Granular SBR	9.3	8 h		90%		[76]
	19.2	8 h		96-99%		[77]
JLR	2-9			80-96%		[57]
	0.4-5.9			93-97%		[57]
	0.5-19.4	1.4-11.5 d	1.4 d	80-90%		[22,80]
MBR	0.82	21 d		99%		[83]
	2.03	3 d	60 d	96%		[16]
	1-2			96%		[81]

	1	2 d		94-97%	20	[82]
fixed bed biofilm	0.2-8	5-16 d	-	91%		[18]
SBBR	0.3-9.1		-	78-99%		[85]
MBBR	2-3		-	82-93%		[23]
ABC	1-12		-	70-95%		[86]
rotating biological contactor				23-43%		[26]
Advanced anaerobic processes						
UASB	6.3-10.1	0.5-1.5 d		86-90%	35-42	[99])
	1.7-4.7	0.9-1.9 d		57-72%	4-11	[101]
	4-5	24-36 h		86-93%	35	[33]
EGSB	2-20	26 h		90-95%	35	[100]
An SBR	8.6	2.2 d		99%	35	[42]
	2.3-4	1.65 d		80-88%	35	[102]
An MBR	0.6-1.7	4.5 d		97%		[103]
An filter	12	16-46 h		85-92%	37	[105]
	8-37.7	0.33-1 d		82-90%	19-27	[106]
	22-42			80%		[107]
	24-27	18 h		82-92%	35	[108]
fluidized bed	6.2-48.2	3-6.5 h		62-91%	35	[110]
	8.5	4.2 h		85-91%	39-40	[32]
					28-30	[115]

	12-23			70-83%	28-30	[111]
Reactor configuration	OLR	HRT	SRT	COD removal	temperature	References
	Kg $m^{-3}d^{-1}$		d	%	°C	
An moving bed biofilm reactor	18.4-30	1.6-2.5 d		80%	31-39	[117]
An Hybrid filter	3.6			72-76%	25	[34]
	5-12			96-98%		[112]
co-digestion						[41]
	0.85	12 d				[40]
Combined anaerobic-aerobic processes						
AF-UASB+ CAS	1.4- 3.2			96-99%		[109]
AF+SBR	10			99%		[115]
CSTR+AF+CAS	0.8-1.8	5-9.5 d		88-98%		[53]
UASB+CAS	9.5	2.3 d				

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