Task Group on NSF/ANSI 350
Straw Ballot
August 21, 2019

Purpose

The purpose of this straw ballot is to revise COD concentration levels in greywater challenge water for systems treating laundry source waters.

Background

The NSF staff at the Waco Test Facility has tried numerous combinations of wastewater components (different volumes and different brands) to achieve the influent parameters required in the standard. When the BOD levels are in range; the COD levels are above 500 mg/l. When the COD levels are in range; the BOD levels are below 220 mg/l.
The issue proponent took a closer look at the other challenge water's influent parameters. After doing this it was noticed that for Bathing and Combined challenge water the COD/BOD ratio is 2.0 & 1.9, respectively; whereas, for the Laundry challenge water it is only 1.35.
The issue proponent recommends raising the COD influent requirement for Laundry challenge water to raise the COD/BOD ratio to a 1.9 ratio.

The WWT Task Group on NSF/ANSI 350 discussed this topic and agreed to send language to straw ballot.

The grey highlighted portions of the language are proposed additions to the language of the standard.
The ~~strikeout~~ portions of the language are proposed deletions to the language of the standard.

An affirmative (yes) vote on this straw ballot means you agree with the revised language as submitted.

A negative (no) vote on this straw ballot means you disagree with the revised language as submitted. A negative vote must include an explanation of why you disagree with the revised draft.

NSF/ANSI Standard
For Wastewater Technology –

Onsite residential and commercial water reuse treatment systems

8.1.2.1.2 Greywater challenge water: Systems treating laundry source water

Prepare the challenge water according to the following formula:

Wastewater components[1]	**Amount/100 L**
liquid laundry detergent (2×)	40 mL
A2 - Fine Test dust, meeting ISO 12103-1	10 g
secondary effluent	2 L
raw influent screened to ≤ 1mm	1 L
liquid laundry fabric softener	21 mL
Na_2SO_4	4 g
$NaHCO_3$	2 g
Na_3PO_4	4 g
urea	as needed to bring influent TKN within the specified range
NaOH	as needed to adjust pH
HCl	as needed to adjust pH

[1] See Annex C for example products.

The amount of individual wastewater components are recommendations. If the required range for the 30-day average concentration of individual parameters are not met using the recommended volumes, then the volume of wastewater components can be adjusted to achieve the required 30-day average concentrations. All necessary adjustments to the ingredient volumes shall be reported in the final report.

The laundry water delivered to the system shall be as follows:

Parameter	Required range	Individual sample maximum
TSS	50 – 100 mg/L	—
BOD_5	220 – 370 mg/L	—
temperature	25 – 35 °C	—
pH	6.0 – 8.5	—
turbidity	50 – 90 NTU	—
total phosphorous – P	< 2 mg/L	—
total Kjeldahl nitrogen – N	4.0 – 6.0 mg/L	—
COD	~~300 – 500 mg/L~~ 440-740 mg/L	—
total coliforms[1] (30-d geometric mean)	10^3 – 10^7 cfu/100 mL	10^9 cfu/100 mL
E. coli[1] (30-day geometric mean)	10^2 – 10^6 cfu/100 mL	10^7 cfu/100 mL
[1] See Section 8.6.1.2.		

8.1.2.1.3 Greywater challenge water: Systems treating bathing and laundry source waters combined

Each 100 L challenge water shall be prepared using 53 L of Section 8.1.2.1.1 and 47 L of Section 8.1.2.1.2. The greywater delivered to the system shall be as follows:

Parameter	Required range	Individual sample maximum
TSS	50 – 160 mg/L	—
BOD_5	130 – 210 mg/L	—
temperature	25 – 35 °C	—
pH	6.0 – 8.5	—
turbidity	30 – 100 NTU	—
total phosphorous – P	1.0 – 3.0 mg/L	—
total Kjeldahl nitrogen – N	3.0 – 5.0 mg/L	—
COD	~~250 – 400 mg/L~~ 260-420 mg/L	—
total coliforms[1] (30-day geometric mean)	10^3 – 10^7 cfu/100 mL	10^9 cfu/100 mL
E. coli[1] (30-day geometric mean)	10^2 – 10^6 cfu/100 mL	10^7 cfu/100 mL
[1] See Section 8.1.2.		