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**Dear International Wastewater Services Flushability Group,**

Suominen applauds your efforts for this undertaking. As a participant in the writing of INDA's Nonwoven Flushable Guidance Document, which required over 9 years of effort to come to what we believed was the best possible form in the 3<sup>rd</sup> edition, we understand that developing a guideline for flushability takes considerable time and resources.

We have additional comments which could not be addressed in the templates provided:

1. **Lack of scientific basis.** In many of the methods, there is no scientific basis for why a certain criteria is set. For instance, the sieve requested in the biodegradation tests is requested be 0.6mm, which appears to be arbitrarily chosen as tighter than the 1mm sieve with years of comparative records
2. **Sample acquisition places undue burden on 3<sup>rd</sup> party laboratories.** Requirements by the IWSFG guidelines place the burden on the laboratories to collect samples at local retailers. Many of the products that are requested for testing would not be available locally to the 3<sup>rd</sup> party lab, and differences in seasonal availability make this an extremely difficult requirement to adhere to.
3. **No evidence that tests are reproducible and repeatable.** We have concern on the reproducibility and repeatability of the suggested test methods since information on such has not been provided nor have 3<sup>rd</sup> party labs been identified who are already familiar with conducting the test methods provided in the IWSFG document. For instance, the use of the shaker flask (IWSFG PAS 3C) had been removed from the nonwoven flushable guidance because of repeatability issues. Additionally, multiple 3<sup>rd</sup> party labs need to be consulted since there are some tests which in their description are unfeasible to reproduce. i.e. drain line snagging test.
4. **Inconsistencies throughout documents.** For instance, the total use volume of dry toilet tissue varies amongst test methods from 1 sheet to 6 sheets when it is clear that the typical user does not limit to 1 sheet of toilet paper for typical use.
5. **Confusion.** It can create confusion in the present guideline, where four disintegration test methods are proposed. However, if the sample gets fully dispersed in the IWSFG's most representative method it is unclear why there should be time spent on further testing.
6. There should be one universal test method for dispersibility, which currently seems to be tested across multiple PAS. **Lack of clarity on the critical characteristic of interest.** For instance, there is no need for a combination effort such as seen in PAS 2C, combining toilet, drainline and disintegration demands into one test method.
7. **Unwarranted attack on cellulose fibers for use in flushable products.** Regenerated cellulose fibers are what we believe to be one of the best options available with respect to both consumers and to the environment. Regenerated cellulose fibers (i.e. viscose) have been shown to have higher biodegradation rates compared to natural fibers (i.e. cotton) because they are close to 100% cellulosic content, and the commentary within the IWSFG guideline states that viscose is likely not guilty for marine textile emission.

We thank you for allowing us to review and to provide our feedback this criteria for recognition as a flushable product. We look forward to collaborating with wastewater community as you develop these methods further. [Please note that you have our permission to share our comments for public view.]

Sincerely,  
Suominen Corporation