

Comment Number	Initials <sup>2</sup>	Line Number (e.g. 17)	Clause/ Subclause (e.g. 3.1)	Paragraph/ Figure/ Table (e.g. Table 1)	Type of comment <sup>3</sup>	Comments	Proposed change	Observations of the secretariat
1	KCC	All lines where it occurs			Ge	Amend the word standard to guideline throughout to stop any confusion on behalf of the reader that these documents are standards created under the multi stakeholder processes of the International Standards Organization (ISO)	Change the word standard to guideline throughout	Change “standard” to “specification.”
2	KCC		Forward		Ed	Forward should be Foreword <a href="https://www.merriam-webster.com/dictionary/foreword">https://www.merriam-webster.com/dictionary/foreword</a>	Correct	Accepted
3	NP	Various places throughout document			Ge	The term “standard” is not appropriate as this collection of terms, definitions, and test methodology reflect the consensus of various wastewater organizations globally. However, this work has not been authenticated or sanctioned by any standards body.	Term “standard” should be replaced with “guideline” throughout all relevant documents.	See comment 1.
4	NP	Foreword			Ge	In the foreword 4th paragraph, it states that “the task of the group was to prepare standards reflecting the above purpose.” It does not state that this group accomplished that goal. Did they?	Please clarify.	Not accepted. No reference to the PAS.
5	PG				Ge	Submitting comments on the International Wastewater Services Flushability Group (IWSFG) Standard in this public comment period in no way represents participation in the development process of the IWSFG Standard or PAS test documents. Nor does commenting imply agreement with any content; where portions of the IWSFG documents have not been commented upon, consent with the content therein is not implied.		Not accepted. No reference to the PAS.

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6	PG				Ge	<p>The IWSFG Standard and the associated Publicly Available Specification (PAS) documents do not outline an approach for determining compatibility with wastewater infrastructure. The IWSFG documents lack any content or context regarding infrastructure issues currently experienced by wastewater utilities. Further, the IWSFG documents contain no data, examples or details regarding issues that can be attributed to flushable wipes. Therefore, the IWSFG documents provide no justification for the proposed requirements for flushable products, and as such, the IWSFG Standard represent arbitrary performance requirements that are unfounded and unrelated to issues faced by wastewater utilities. The IWSFG documents do not contain sufficient documentation or information to establish why the IWSFG documents have been developed, or what results the IWSFG documents seek to achieve regarding flushable wipes beyond vague performance concepts.</p>	<p>Provide written justification for the IWSFG Standard, including reference to all data and examples of infrastructure issues attributable to flushable wipes.</p>	<p>Not accepted. No reference to the PAS.</p>

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7	PG				Ge	Based on the results of field testing and forensics conducted by a range of stakeholders, all available evidence continues to reinforce the fact that flushable wipes are compatible with wastewater infrastructure.	Provide evidence of impact to wastewater infrastructure that has been demonstrated to be the result of flushable wipes. Note to Entry: Recovery of intact wipes from field studies is insufficient evidence. This testing contradicts the premise of the IWSFG Standard, specifically because the testing demonstrates the ability of flushable wipes to move with solids, which is the critical aspect for compatibility with wastewater infrastructure. From Section 19.14 “Flow in Gravity Sewers” in Water-Resources Engineering (4th Edition, McGraw-Hill, pg. 693): “To prevent the settlement of wastewater solids, the velocity in a sewer flowing full should be not less than about 2 ft/sec (0.6 m/sec). Such a sewer flowing one-sixth full will have a velocity of 1 ft/sec (0.3 m/sec), which is reasonably adequate. This is especially important in sanitary sewers, for decomposition of settled wastes results in undesirable conditions.”	Not accepted. No reference to the PAS.
8	PG				Ge	The IWSFG documents specify that toilet paper was utilized for benchmarking the acceptance criteria of the PASs. No details regarding the processes that were followed in developing the benchmarks have been provided in association with the IWSFG documents. Reference to the historical performance of toilet paper is insufficient justification for establishing benchmark performance, and is particularly imprecise given the wide range of types and characteristics of toilet paper found globally.	Provide details of all benchmark testing conducted by the IWSFG to allow for independent validation and verification of the reproducibility of laboratory tests and acceptable criteria proposed by the IWSFG.	Not accepted. No reference to the PAS.

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9	PG				Ge	The IWSFG documents lack technical details linking the performance of any product (including toilet paper utilized as a benchmark) in any of the IWSFG PAS test methods, and the compatibility of that product with any portions of wastewater infrastructure.	Provide details of all testing (laboratory and field) where the established benchmarks were verified as appropriate and necessary for the protection of infrastructure.	Not accepted. No reference to the PAS.
10	PG				Ge	The IWSFG documents contain multiple technical errors that render the documents unfit for publication or use as laboratory test methods without significant revision. For example, IWSFG-PAS-5A-Aerobic-Biodisintegration-Test-2017 contains no laboratory controls for evaluating if the test results are acceptable- this is critical error and omission, and renders the method unusable as written.	Fix contradictions, error and omission of all Publicly Available Specification (PAS) test methods.	Accepted
11	PG				Ge	Given the extent of the revisions necessary, the IWSFG Standard and associated PASs should be resubmitted for a second public comment period once all errors and omissions have been rectified.	Fix contradictions, error and omission of all Publicly Available Specification (PAS) test methods and resubmit for a second public comment period.	Accepted.
12	PG				Ge	The IWSFG documents contain no details regarding the processes that were followed in developing the IWSFG Standard and Publicly Available Specification (PAS), or the processes that will be followed for inclusion of public comments. Transparency regarding the processes that the IWSFG are following, including how the input of a range of stakeholders will be included, is necessary to understand whether the IWSFG standard has been developed appropriately.	Provide details of all test method and document development and approval processes being followed by the IWSFG.	Not accepted. No reference to the PAS.

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13	PG				Ge	The International Standards Organization (ISO) provides the following information regarding a Publicly Available Specification: “Publicly Available Specifications have a maximum life of six years, after which they can be transformed into an International Standard or withdrawn.” ( <a href="https://www.iso.org/deliverables-all.html#TR">https://www.iso.org/deliverables-all.html#TR</a> ).	PG	Not accepted. No reference to the PAS.
14	PG				Ge	While the Draft status of the IWSFG Standard and PAS documents is acknowledged, significant editing of both general and scientific content of the documents is required. The lack of editorial and scientific rigor of the documents makes commenting ineffective at this stage of development.	The IWSFG Standard and PAS documents should be recalled, revised then resubmitted for a second public comment period; the documents are not in a condition suitable for public review.	Second public comment period will occur.
15	PG				Ge	The IWSFG Standard and each of the IWSFG PAS test methods contain numerous errors, as well as inter-method and intra-method contradictions regarding critical technical details, that render the methods incapable of interpretation, let alone use as written. A laboratory, whether they were ISO-accredited or not, would be incapable of conducting the PAS tests as currently written.	Revise all PAS test methods.	Not accepted. No reference to the PAS.
16	PG				Ge	The PASs contain numerous instances where different and contradictory “Acceptance Criteria” are provided, rendering the PAS unusable as currently written.	Revise PASs to eliminate contradictory procedures and “acceptance criteria”.	Accepted.

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17	PG				Ge	<p>Misuse of the word “standard,” and variations thereof, occurs frequently throughout the texts. The documents assembled by the IWSFG are neither a Standard, nor are they Publicly Available Specifications developed, for example, in accordance with the process set forth by the British Standards Institute (BSI). Revise all instances to utilize an appropriate term such as “Guideline” or equivalent. Alternatively, provide details of the national or international standards organization that is accrediting the documents as “standards” or as “Publicly Available Specifications.” This is a critical element for understanding how the standard and associated PASs have been developed.</p> <p>Note to Entry: The first sentence of the British Standards Institute (BSI) definition of a standard requires agreement- not among a single organization or group of common stakeholders- but among “manufacturers, sellers, buyers, customers, trade associations, users or regulators.” The full definition reads (<a href="https://www.bsigroup.com/en-GB/standards/Information-about-standards/what-is-a-standard/">https://www.bsigroup.com/en-GB/standards/Information-about-standards/what-is-a-standard/</a>): “In essence, a standard is an agreed way of doing something. It could be about making a product, managing a process, delivering a service or supplying materials – standards can cover a huge range of activities undertaken by organizations and used by their customers. Standards are the distilled wisdom of people with expertise in their subject matter and who know the needs of the organizations they represent – people such as manufacturers, sellers, buyers, customers, trade associations, users or regulators... They are designed for voluntary use so it’s up to you –</p>	<p>Clarify if the IWSFG has developed Standard 1 and the associated PAS documents in accordance with a standard process in accordance with a third-party certification body (ISO or BSI, as examples).</p> <p>In the interest of transparency, clarify the stakeholders groups and organizations that participated in the development of the IWSFG Standard and PAS documents.</p>	Not accepted. No reference to the PAS.

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						<p>you're not forced to follow a set of rules that make life harder for you, you're offered ways to do your work better. Standards are knowledge. They are powerful tools that can help drive innovation and increase productivity. They can make organizations more successful and people's everyday lives easier, safer and healthier."</p> <p>Note to entry: use of the word, or quotation of the word "Standard" or similar in comments does not imply agreement with the use of the term in the IWSFG Standard 1 or PAS tests.</p>		

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18	PG				Ge	Per the BSI definition of the term “standard” ( <a href="https://www.bsigroup.com/en-GB/standards/Information-about-standards/what-is-a-standard/">https://www.bsigroup.com/en-GB/standards/Information-about-standards/what-is-a-standard/</a> ) the IWSFG Standard and PAS documents are voluntary, and that the IWSFG neither possesses, nor is chartered to develop, mechanisms for enforcing these documents.	Clarify.	See comment 1.
19	PG				Ge	Misuse of the word “require,” and variations thereof, occurs frequently throughout the texts. The IWSFG documents can in no way require any action. Per the BSI definition of the term “standard” ( <a href="https://www.bsigroup.com/en-GB/standards/Information-about-standards/what-is-a-standard/">https://www.bsigroup.com/en-GB/standards/Information-about-standards/what-is-a-standard/</a> ): “They are designed for voluntary use...” Note to entry: Use of the word, or quotation of the word “requirement” or similar in comments does not imply agreement with the use of the term in the IWSFG Standard 1 or PAS tests.	Revise to “recommend” or similar.	Accepted
20	PG				Ge	Contradictory use of words and phrases “test standards” “established IWSFG standard” or “Publicly Available Specification.”	Clarify the proper terminology to describe the documents the IWSFG has produced.	See comment 1.
21	PG				Ge	It is unclear from the documents if a national or international standardization body has certified, or will certify, the “established IWSFG standard.”	Clarify if a national or international standardization body has certified, or will certify, the IWSFG documents.	Not accepted. No reference to the PAS.

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22	PG	4		Paragraph	Ge	Per the British Standards Institute (BSI) definition of the Publicly Available Specification (PAS) process, the public comments must be addressed to ensure that the content is satisfactory to “a wide range of stakeholders.” From BSI ( <a href="https://www.bsigroup.com/LocalFiles/en-GB/PAS/The%20PAS%20Process/BSI-PAS-0-2012-Principles-of-PAS-standardization-UK-EN.pdf">https://www.bsigroup.com/LocalFiles/en-GB/PAS/The%20PAS%20Process/BSI-PAS-0-2012-Principles-of-PAS-standardization-UK-EN.pdf</a> ): “Final consensus and publication: Comments arising from the public consultation are discussed by the steering group, with the aim of achieving a document underpinned by consensus (see 4.6)...In common with all BSI standardization documents, publication is subject to approval by the Director of Standards who will seek evidence that the final text of the document commands support from a wide range of stakeholders.”	In keeping with the designation of these documents as PAS, confirm the IWSFG will modify the standard and associated PASs to the satisfaction of a wide range of stakeholders.	Not accepted. No reference to the PAS.
23	PG	4		Paragraph	Ge	The PAS process is intended to be transparent.	Given that the PAS process is intended to be transparent, provide details regarding the process the IWSFG will follow for revising the documents.	Second comment period will occur.

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24	PG	6-7		Copyright Notice	Ge	IWSFG has attempted to copyright material that is currently under copyright protection. For example, consider the following definition from BSI ( <a href="https://www.bsigroup.com/LocalFiles/en-GB/PAS/The%20PAS%20Process/BSI-PAS-0-2012-Principles-of-PAS-standardization-UK-EN.pdf">https://www.bsigroup.com/LocalFiles/en-GB/PAS/The%20PAS%20Process/BSI-PAS-0-2012-Principles-of-PAS-standardization-UK-EN.pdf</a> ): “2.2 essential intellectual property rights (essential IPR) intellectual property rights that have been included within a PAS such that it would be impossible to implement the PAS without making use of those rights, and the only way to avoid an infringement of the rights in respect of implementation of the PAS is therefore to request a licence from the owner.”	Provide evidence of consent/license on the IWSFG for all copyrighted content the IWSFG has utilized that was not developed by the IWSFG.	Copyright issues to be addressed.
25	GT	6 - 12			Ge	I am concerned about the copyright statement because a significant amount of the text of this document is drawn, word-for-word, from existing drafts created by ISO/TC224/WG10, which are similarly copyrighted. In particular, much of the text of this document is identical to ISO/TC224/WG10 N398 and N217. The IWSFG does not acknowledge these sources, nor is it apparent that IWSFG sought permission from ISO to extract large portions of text from these documents without attribution to ISO.	IWSFG should remove the copyright claims from this document.	Copyright issues to be addressed.

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26	GT		Forward		Ge	<p>While this document is presented as a “standard,” IWSFG is not organized, nor does it conduct itself, in the manner of a typical Standards Development Organization (“SDO”). However, the IWSFG is not an SDO and has not been recognized or accredited by any national or international standards body as an SDO.</p> <p>Voting membership in the IWSFG is very limited. Just to provide one example, manufacturers of the very products this document seeks to set criteria for are denied voting membership. It is completely inappropriate for the IWSFG to attempt to set criteria for the “socially responsible and environmentally sustainable” conduct of manufacturers and distributors while explicitly excluding them from having a meaningful (i.e., voting) role in the process of setting those criteria. Interestingly, the document does not commit the members of the IWSFG to act in a socially responsible or sustainable manner.</p> <p>Further, the process by which IWSFG drafts and creates its documents is not transparent. The participants, dates of meetings, meeting resolutions, etc., are all kept from the public eye. Though IWSFG has invited public comment on its documents, it has not made any commitment as to a process that fairly, transparently and impartially addresses and takes those comments into account.</p> <p>It is also inappropriate to suggest that any document produced by IWSFG represents a “global consensus.” Even by its own terms, the IWSFG represents only a fraction of the global wastewater utility sector, as it includes only the wastewater service associations from Spain,</p>	<p>Throughout the document (including the title), the term “standard” should be replaced with “criteria” to avoid misleading readers into concluding that this document is the product of a formally established and accredited Standards Development Organization.</p> <p>In the first line of the indented text beginning with “The criteria for flushability . . .”, delete the term “global.”</p> <p>In the fifth paragraph, delete the second sentence beginning with “The group expects . . .”</p> <p>Throughout the document, use the term “criteria” rather than standard.</p>	<p>See comment 1.</p> <p>Not accepted.</p> <p>Not accepted.</p> <p>See comment 1.</p>

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						<p>Australia, Canada, Japan and one association from the U.S. Therefore, this “global consensus” does not include most of Europe, and has no representation from continental Asia, Africa, the Middle East or South America.</p> <p>Lastly, this document uses the ISO standards format and style, and even appropriates significant amount of text from ISO drafts, and thus potential users might have the mistaken impression that this is a standard written by a recognized national or international standards body. Which is not accurate.</p>		

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27	INDA	13	Forward		ED	<p>“The group expects the manufacturers and distributors of their products to act in a socially responsible and environmentally sustainable manner by adhering to the established standards.”</p> <p>This statement is presumptuous. The IWSFG implies that not adhering to this standard precludes the possibility of being socially responsible or environmentally sustainable. The IWSFG has neither the expertise nor the authority to define what is meant by “socially responsible” and “environmentally sustainable”. At best, this can be stated as an opinion of the IWSFG.</p>	Remove statement or reword to reflect this is an opinion of the IWSFG.	Not accepted.
28	PG	13		Forward [sic]	Ge	<p>General and technical content in the IWSFG Standard and associated PASs, and the current Draft Technical Report (TR) from TC224 WG10, share a common source.</p> <p>The “purpose” included in the forward[sic] of the IWSFG Standard 1 contains language identical to the Scope of the ISO TC224 WG10 TR.</p>	<p>Describe how the membership of the IWSFG differs from the wastewater stakeholders in International Standards Organization (ISO) Technical Committee (TC) 224 Working Group 10 (WG10).</p> <p>Declare for all common details between the IWSFG and ISO documents, if the IWSFG or ISO are the rightful copyright owners.</p>	<p>Not accepted. No reference to the PAS.</p> <p>Copyright issues to be addressed.</p>

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29	PG	13		Forward [sic]	Ge	<p>Sentence describing wastewater services is hyperbole.</p> <p>Expectations of the IWSFG are irrelevant to the document.</p>	<p>Delete the following sentence: “Wastewater services are organizations acting for the public good as a public service. The group expects the manufacturers and distributors of their products to act in a socially responsible and environmentally sustainable manner by adhering to the established standards.”</p> <p>If the sentence is retained, for context, provide the IWSFG’s position on “blending,” specifically how the practice of blending protects the public good and represents environmentally sustainable operation by wastewater services.</p> <p>Note to entry: “The [US Environmental Protection Agency] EPA issued guidance in the mid-2000s banning a technique used by some utilities in which some wastewater is routed around the treatment process before being blended with treated flows and then discharged into areas in the receiving waters known as mixing zones. The practice is used to keep the high volumes of wastewater, such as those during storms, from overwhelming the treatment plant. The agency said blending and the use of mixing zones violate the Clean Water Act.” (from: <a href="https://www.bna.com/wastewater-practice-mostly-n57982084593/">https://www.bna.com/wastewater-practice-mostly-n57982084593/</a>). “Opponents argue that the blending ban raises costs for wastewater utilities.” (From <a href="https://www.wateronline.com/doc/epa-s-wet-weather-policies-debated-in-court-0001">https://www.wateronline.com/doc/epa-s-wet-weather-policies-debated-in-court-0001</a>)</p>	Not accepted.

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30	WSL NZ	14				Forward: The title should read Foreword. This applies to all PAS's.		Accepted.
31	GT	75 and 81	1.0		Te	Footnote 1 should be deleted and the main text revised to reflect the importance of industrial and commercial discharges.  Particularly in industrialized economies (e.g., in all of the countries represented in the IWSFG), it is very common for wastewater utilities to accept industrial and commercial wastewaters in addition to sanitary wastewater. The substances discharged into municipal/public systems by industrial and commercial dischargers typically constitute a major source of the pollutants that must be managed, treated and discharged by the utilities. Such discharges should not be relegated to a minor role in a footnote and minimized by saying that they occur only "in some instances." Virtually every major urban wastewater system in industrialized economies accepts such discharges. Therefore, any meaningful discussion of the impact on the environment of wastewater utilities must take full account of such discharges.		Not accepted. No reference to the PAS.
32	PG	75-102	1	Introduction	Ge	Duplicate language. The Introduction is available in multiple PAS documents, and none of the content is relevant to PAS-0.	Delete.	Not accepted.
33	DPI	77	1		Te	Consider adding 'reuse/recycling'		Accepted. Additional bullet to be added
34	PG	77-78	1	Introduction	Te	Incomplete. List does not account for all subsequent pathways for wastewater treatment	Revise to include common pathways for wastewater treatment plant effluent	See comment 33.

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						plant effluent. Examples indirect potable reuse and aquifer recharge.		
35	LZ	82	1	Introduction	Ge	The term “moist wipes” is not used in the nonwoven industry	Recommend to replace it by “wet wipes”	Not accepted.
36	NP	83-84	Introduction		Ge	This list is not inclusive of all products found in various forensic collection studies including paper towels, baby wipes, etc.	Recommend reviewing various forensic collections studies including NYC 2016, Portland and other global reports for a comprehensive list.	Not accepted.
37	KCC	84-86			Ed	The systematic study of clogs in UK, influents at UK and US treatment plants provide clear data to support that the burden of clogging is not due to wipes labelled flushable. In classic risk assessment terms Wipes labelled flushable are low occurrence, low impact based on materials and design to break up and size Non flushable baby, cleaning wipes are high occurrence, super high impact based on materials and design to not break up Any mitigation plan should mitigate high/high risks not the low/low		Not accepted. No reference to the PAS.
38	PG	84-88	1	Introduction	Te	The statement: “The physically adverse effects of the introduction of such products to wastewater systems (clogging and plugging) have already been identified” is incorrect and misleading. No such identification of physically adverse effects from flushable wipes has been demonstrated.	Delete. If retained, provide the results of studies demonstrating physical adverse effects (i.e., impacts to wastewater infrastructure) from flushable wipes.	Not accepted.

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	PG	84-88	1	Introduction	Te	The statement "...environmental effects have not been studied systematically. For example, various flushed products may comprise materials and chemicals that can be harmful to the environment; hence, such products should not be identified as "flushable"." is entirely speculative and anecdotal.	Delete.  If retained, provide the results of studies demonstrating environmental effects that are attributable to flushable wipes. Note to Entry: The conclusions of studies regarding regenerated cellulose referenced in the IWSFG documents refute the IWSFG's position on regenerated cellulose and are not appropriate substantiation for the IWSFG's standard, PASs or positions. If retained, modify text to reflect conclusions drawn in Reference #2 and associated references therein.	Not accepted.
39	NP	86-89	Introductions		Ge	General statements presented here on long term sustainability of wastewater systems with no references or rationale as to why existing flushable products are not found acceptable by wastewater. Given recent data including NYC 2016 study, Perry settlement and recent UK study, flushable wipes were not found to be contributing to blockages or increased operation costs.	Please reconcile or clarify rationale as to how this standard will improve long term sustainability.	Not accepted.

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40	PG	88-94	1	Introduction	Ge	<p>Significant similarities exist between ISO TC224 WG10 Technical Report and the IWSFG documents.</p> <p>For example, the introduction of ISO TC224 WG 10 TR contains: “the qualities and characteristics of discharges to the wastewater system. This should minimize disruption to their collection, transport and treatment systems...”</p> <p>IWSFG PAS-0 contains: “the qualities and characteristics of those products that may truly be considered as being “flushable”... will ultimately lead to the long-term sustainability of wastewater systems and the minimization of potential problems such as pipe blockages and equipment failures in sewer networks.”</p> <p>This language appears to share a common authorship and intent.</p>	<p>Clarify the author(s) of PAS-0 and note whether this author(s) participated in the development of the ISO TC224 WG10 TR. Provide documentation of consent from ISO acknowledging and allowing the content of the Technical Report from ISO TC224 WG10 to be utilized as part the IWSFG documents.</p>	<p>Not accepted. No reference to the PAS.</p> <p>Copyright issues to be addressed.</p>
41	KCC	95-98			Ed	<p>“The goal of the IWSC is not to ban the production and/or use of these products, but to encourage manufacturers to identify those products that do not meet the established IWSFG standards as not being “flushable” and to encourage users to dispose the products after use in a more appropriate manner.”</p> <p>This paragraph is disingenuous knowing that many US Toilet Papers cannot pass any of the 3 disintegration tests.</p>		<p>Not accepted. No reference to the PAS.</p>

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42	KCC	95-98			Ge, Te	<p>The scope of this 'standard' as written clearly includes toilet paper.</p> <p>The multiple Introductions used go to lengths to indicate that Toilet Paper is not the issue facing wastewater, but it is the advent on more recent hygienic products.</p> <p>Preliminary testing using the methods as written shows clearly that there are many Toilet papers which are capable of passing all of the 3 disintegration tests, however there is also a significant number of Toilet Papers which will clearly fail all 3 tests and would not be considered flushable.</p> <p>A simple Interlab study of 5 toilet papers was carried out at the KC labs and 2 other labs (An industry and a 3<sup>rd</sup> Party lab)– all 3 labs confirmed that 3 of the 5 toilet papers tested, failed all Disintegration Test using methods PAS3A and PAS 3B – see table below with all data from Interlab study</p>		Not accepted. No reference to the PAS.

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Code	Lab	PAS3A% passing 6mm	PAS3B% Passing 6mm	PAS3C% Passing 6mm
Code F	3rd Party Lab	70.15%	89.95%	
Code F	3rd Party Lab	71.01%	86.62%	
Code F	3rd Party Lab	71.14%	89.65%	
Code F	3rd Party Lab	65.63%	89.70%	
Code F	3rd Party Lab	70.85%	89.97%	
Code F	IC	72.10%	66.82%	95.14%
Code F	IC	61.57%	66.33%	96.09%
Code F	IC	75.56%	74.76%	93.77%
Code F	IC	73.40%		
Code F	IC	79.79%		
Code F	Industry Lab	91.54%	74.49%	70.98%
Code F	Industry Lab	93.39%	73.28%	80.82%
Code F	Industry Lab	90.91%	72.34%	74.09%
Code F	Industry Lab	100.00%		
Code F	Industry Lab	100.00%		
Code G	3rd Party Lab	99.99%	99.68%	
Code G	3rd Party Lab	99.96%	99.61%	
Code G	3rd Party Lab	99.93%	99.23%	
Code G	3rd Party Lab	99.96%	98.65%	
Code G	3rd Party Lab	99.80%	98.33%	
Code G	IC	99.39%	92.48%	96.03%
Code G	IC	100.00%	97.53%	98.87%
Code G	IC	99.43%	94.64%	97.13%
Code G	IC	99.80%		
Code G	IC	99.75%		
Code G	Industry Lab	100.00%	100.00%	100.00%
Code G	Industry Lab	100.00%	100.00%	100.00%
Code G	Industry Lab	100.00%	100.00%	100.00%
Code G	Industry Lab	100.00%		
Code G	Industry Lab	100.00%		
Code I	3rd Party Lab	100.00%	100.00%	
Code I	3rd Party Lab	100.00%	100.00%	
Code I	3rd Party Lab	100.00%	100.00%	
Code I	3rd Party Lab	100.00%	100.00%	
Code I	3rd Party Lab	100.00%	100.00%	
Code I	IC	100.00%	100.00%	100.00%
Code I	IC	100.00%	100.00%	100.00%
Code I	IC	100.00%	100.00%	100.00%
Code I	IC	100.00%		
Code I	IC	100.00%		
Code I	Industry Lab	100.00%	100.00%	100.00%
Code I	Industry Lab	100.00%	100.00%	100.00%
Code I	Industry Lab	100.00%	100.00%	100.00%
Code I	Industry Lab	100.00%		
Code I	Industry Lab	100.00%		

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Code	Lab	PAS 3A % passing 6mm	PAS 3B % Passing 6mm	PAS 3C % Passing 6mm
Code S	3rd Party Lab	71.40%	87.62%	
Code S	3rd Party Lab	77.58%	90.21%	
Code S	3rd Party Lab	70.28%	91.11%	
Code S	3rd Party Lab	61.80%	81.92%	
Code S	3rd Party Lab	59.36%	86.29%	
Code S	KC	89.26%	63.72%	87.48%
Code S	KC	90.30%	63.89%	85.89%
Code S	KC	88.91%	69.81%	88.06%
Code S	KC	88.88%		
Code S	KC	84.30%		
Code S	Industry Lab	92.75%	82.40%	95.37%
Code S	Industry Lab	94.30%	89.07%	97.39%
Code S	Industry Lab	96.60%	84.89%	98.46%
Code S	Industry Lab	88.71%		
Code S	Industry Lab	89.58%		
Code W	3rd Party Lab	76.44%	76.63%	
Code W	3rd Party Lab	71.02%	77.54%	
Code W	3rd Party Lab	69.34%	76.28%	
Code W	3rd Party Lab	78.26%	66.78%	
Code W	3rd Party Lab	63.47%	77.58%	
Code W	KC	86.09%	53.99%	64.97%
Code W	KC	84.71%	50.89%	66.15%
Code W	KC	87.95%	56.41%	63.47%
Code W	KC	85.81%		
Code W	KC	85.07%		
Code W	Industry Lab	91.68%	78.53%	90.43%
Code W	Industry Lab	96.91%	77.85%	77.89%
Code W	Industry Lab	91.10%	74.47%	80.01%
Code W	Industry Lab	91.21%		
Code W	Industry Lab	89.39%		

A 'standard' which uses Toilet Paper as a benchmark and fails to encompass toilet paper has missed its mark and needs to be reconsidered.

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43	PG	96	1	Introduction	Ge	Contradictory. "The goal of the IWSFG is... identify those products that do not meet the established IWSFG standards." Here, the reference to "established IWSFG standards" appears to imply that the PAS documents are "standards" and not "Publicly Available Specifications."	Clarify if the PAS documents are "Publicly Available Specifications" or "established IWSFG standards."	See comment 1.
44	PG	96	1	Introduction	Ge	Vague.	If the PAS documents are standards, identify the national or international standards body that has certified or accredited the documents. If the PAS documents are Specifications, clarify if the PAS were developed in conjunction with ISO or BSI.	See comment 1.
45	ANON 1	99-109	Intro- duction, Sub- sequently entire document		GE	The IWSFG, has developed a document it refers to as standards, albeit draft, that are intended to clearly and prominently identify products as flushable. Specifically, the Document is referred to as a Publicly Available Specifications (PAS) document in line 101 of the introduction, terms and definitions for determination of Flushability. Use of this PAS term later is modified to represent Publicly Available Standards, as in line 106 and thereafter. This is misleading, if not wrongly leading readers to believe that this document and the test methodologies appears to be official and accredited by an international standards group.	The IWSFG should remove all references to PAS and offer their document as an interim guideline or a pre-standard document for future (PAS) recognition.	See comment 1.

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46	NP	99-102	Introduc- tion		Ge	This document states that “standardization requires the establishment of a language common to the various stakeholders in order to policy understanding and conformity. It would appear that only various wastewater stakeholders were included in the development of these PAS documents. Clearly manufacturers and users of marketed flushable products were not included nor does it appear that toilet manufacturers or plumbers as key stakeholders. As for the use of the term Publicly Available Standard (PAS) please see first row for comments.	Please justify limiting stakeholder to only select wastewater groups.	Not accepted.
47	WSL NZ	134	5.1.1			Collection system: Not all systems are gravity systems some may be pressurized systems.		Accepted.
48	DPI	140	5.1.2		Ge	‘force’ OR ‘pump’		Accepted.
49	PG	106	1	Introduc- tion	Ge	Contradictory use of the phrase “Publicly Available Standard.”	Clarify whether the documents are “Publicly Available Specifications” or “Publicly Available Standards.” If the PAS documents are standards, identify the national or international standards body that has certified or accredited the documents. If the PAS documents are Specifications, clarify if the PAS were developed in conjunction with ISO or BSI.	See comment 1.
50	NP	110-112	3	Scope	Ge	The scope includes defining common terminology in the sale and manufacture of hygiene products. With no such stakeholders involved in this process, it is unclear with no reference as to how such definitions were derived.	Please provide reference or background for expertise in defining common terminology in the manufacture and sales of hygiene products.	Not accepted. No reference to the PAS.

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51	JHI	112	3.0		GE	Why comment that this terminology is for stakeholders in the manufacture and sale of hygiene products when other types of products have also been included in the scope of the documents?		Not accepted. No reference to the PAS.
52	PG	116-117	1	Introduc- tion	Ge	<p>Significant similarities exist between ISO TC224 WG10 Technical Report and the IWSFG documents.</p> <p>For example, the Introduction of ISO TC224 WG 10 TR contains: "This Technical Report addresses the hydraulic, mechanical and environmental conditions found in transport and treatment systems..."</p> <p>The introduction of IWSFG PAS-0 contains: "the definitions of the hydraulic, mechanical and environmental conditions within wastewater conveyance and treatment systems."</p> <p>This language appears to share a common authorship and intent.</p>	<p>Clarify the author(s) of PAS-0 and note whether this author(s) participated in the development of the ISO TC224 WG10 TR.</p> <p>Provide documentation of consent from ISO acknowledging and allowing the content of the Technical Report from ISO TC224 WG10 to be utilized as part the IWSFG documents.</p>	<p>Not accepted. No reference to the PAS.</p> <p>Copyright issues to be addressed.</p>
53	JHI	118			GE	Again the reference to just hygiene products seems to be narrowing the broader scope outlined in Standard 1 which is very general		Not accepted. No reference to the PAS.
53	NP	118	3 Scope	3c	Ge	See comments for 110-112		Not accepted. No reference to the PAS.

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54	NP	121-125	4	References	Ge	Why are there no references for common terminology in the manufacture and sales of hygiene products? Why are current or previous versions of INDA/EDANA Guidelines for Assessing Flushability not a reference document?	Please clarify.	Not accepted. No reference to the PAS.
55	PG	127-354	5	Definitions	Ge	Unreferenced definitions, or definitions from sources unrelated sources.	Provide appropriate, relevant references for all definitions.	Not accepted.
56	PG	127-354	5	Definitions	Te	Frequent incorrect use of the term “conditions.” Note to Entry: By way of example: the temperature and humidity could be used to describe the condition of the ambient air in a room. However, air conditioning and dehumidification are not “conditions” and defining them as a condition is incorrect. Similarly, the presence of microbes is an environmental condition of wastewater, while “biodisintegration” is not a “condition” but rather a process that occurs in wastewater.	Provide appropriate headers for definitions, noting the difference between, for example, conditions and processes.	Partially accepted. Clear distinction will be made between conditions and processes.
57	GP	142			Ed	Refers to IWSFG PAS 2B (UK) which doesn't exist on the website	Remove or fix reference.	Not accepted.

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58	KCC	142-155			Ed	<p>These definitions have been taken from ISO which is covered by copyright, there is no reference given. Other examples exist and need to be checked</p> <p>ISO ISO TR 24524: WD 1</p> <p>236 <b>3.1.4 infrastructure</b></p> <p>237 system of facilities, equipment and services needed for the operation of an organization.</p> <p>238 Note 1 to entry: In a wastewater utility, it is advisable to reserve the term "infrastructure" for physically fixed</p> <p>239 equipment and installations.</p> <p>240 [SOURCE: ISO 9000:2015, Quality Management, 3.5.2, Modified - Note 1 added]</p> <p>241 <b>3.1.5 on-site treatment system</b></p> <p>242 wastewater treatment system located on the property where the wastewater is generated.</p> <p>243 Note 1 to entry: an example of an on-site treatment system is a septic tank.</p> <p>244 Note 2 to entry: properly maintained on-site treatment systems require the regular removal of sludges</p> <p>245 and their transport for disposal and treatment at municipal systems.</p> <p>ISO ISO TR 24524: WD 1</p> <p>19 © ISO 2017, Published in Switzerland</p> <p>20 All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized</p> <p>21 otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the</p> <p>22 internet or an intranet, without prior written permission. Permission can be requested from either ISO at the</p> <p>23 address below or ISO's member body in the country of the requester.</p> <p>24 ISO copyright office</p> <p>25 Ch. de Blandinnet 8 • CP 401</p> <p>26 CH-1214 Vernier, Geneva, Switzerland</p> <p>27 Tel. + 41 22 749 01 11</p> <p>28 Fax + 41 22 749 09 47</p> <p>29 copyright@iso.org</p> <p>30 www.iso.org</p>	Provide citations/reference where needed.	Copyright issues to be addressed.
59	GT	153-155	5.1.4		Te	<p>Note 2 is not necessarily accurate in every case, depending on the specific factual circumstances. For example, in some situations, onsite land application might be permissible in controlled circumstances, or there might be an onsite permitted landfill. Further, not all offsite sludge disposal facilities are owned or operated by municipalities.</p>	Line 153: in the first line of note 2, replace "requires" with "may require," and in line 155, replace "municipal facility" with "authorized facility."	Accepted

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60	DPI	154	5.1.4		Te	Consider adding 'and/or effluent' after 'sludge'		Not accepted.
61	GT	165-172	5.1.6		Te	In many jurisdictions, including the United States, stormwater is generally not considered to be "wastewater." Stormwater might be combined with wastewater in some systems, but that does not transform surface runoff into "wastewater." The fact that many jurisdictions prohibit combined sewers is a further indication that stormwater and wastewater are not the same. Stormwater and wastewater should be separately defined, and the issue of the combined management of the two can be addressed in narrative discussion as necessary.	Remove references to "surface runoff" and "stormwater" from the definition of "wastewater."	Partially accepted
62	GT	175	5.1.7		Te	The term "human waste" is undefined and is unnecessary in this definition given the broad definition of "wastewater." Its inclusion in this definition implies that human waste being transported through a wastewater collection system is something different than wastewater.	In line 175, delete "human waste"	Accepted.
63	GHC	175	5.17	Waste-water collection system	ed	Remove "Human waste"- the definition of wastewater already includes sanitary waste	Delete "Human waste"	Accepted.

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64	GT	185-186	5.1.8		Te	Delete “acting for the public good as a public service.” A wastewater utility can be a private entity acting for profit. Further, while it is certainly commendable to act in the public interest for the public good, that is not an inherent quality of providing wastewater services. Further, including these terms could lead to endless discussions as to what precisely is meant by the “public good” and “public service.”	Delete “acting for the public good as a public service.”	Not accepted.
65	PG	194-196	5.2	Definitions	Te	Incomplete.	Define “biodegradation”	Accepted.
66	ANON 1	196- 205			TE	Confusing definition and use of the term “biodisintegration”  197-198: “disintegration caused by biological activity, especially by enzymatic action, leading to a significant change in the chemical structure.  204-205: “a process in which a product weakens, loses integrity, and breaks into smaller parts”	Clarify biodisintegration.  According to ISO 14855 (2012) the definition of disintegration is:  “physical breakdown of material into very small fragments”.	Accepted.
67	ANON 1	199			TE	The discussion of biodegradable should be removed from this document. Although there is a standard dictionary definition of biodegradable, there are also a variety of definitions based on how the term is used from a marketing perspective. (See FTC language in Green Guides for example.) Since there is no additive value in this document, the NOTE should be removed.	Remove NOTE on biodegradable.	Accepted.

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68	INDA	199			TE	The discussion of biodegradable should be removed from this document. Although there is a standard dictionary definition of biodegradable, there are also a variety of definitions based on how the term is used from a marketing and claims perspective. (See FTC language in Green Guides for example.) Since there is no additive value in this document, the NOTE should be removed.	Remove NOTE on biodegradable.	Accepted.
69	KCC	199			TE	This definition adds no value to these documents, since there is no biodegradation tests.	Remove NOTE on biodegradable.	Accepted.
70	LZ	196-202	5.2.1.	Biodisintegration	Te	Description for “Biodisintegration” in this chapter describes “Biodegradation” according to the ISO 472:2013, 2.1680. It does not describe “Biodisintegration” (see below). Copy of ISO 472:2013, 2.1680 Biodegradation: <composting of plastics waste> degradation caused by biological activity, especially by enzymatic action, leading to a significant change in the chemical structure of a material. “Disintegration” and “Biodegradation” are 2 different definitions (see ISO 14855-1:2012 Chapter 3 and ISO 17088:2012 Chapters 1 & 3).	Change text to: 5.2.1. Disintegration: Physical breakdown of a material into very small fragments. Source: ISO 14855-1:2012: “Determination of the ultimate aerobic biodegradability of plastic materials under controlled composting conditions — Method by analysis of evolved carbon dioxide Part 1 (Chapter 3 point 3.3. disintegration) And ISO 17088:2012: “Specifications for compostable plastics” (point 3.6 disintegration) Remove NOTE for biodegradability	Not accepted.  Accepted.
71	INDA	204–210			ED	Change text as described. Remove notes 1 and 2. The operational definition can be made within the text of the test method ... it is out of context in the terms and definition section.	Change text to, “ a process in which a product weakens, loses integrity, and breaks into smaller parts as a result of exposure to physical forces and/or biological activity.”	Accepted.

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72	ANON 1	204– 210			ED	Change text as described. Remove notes 1 and 2. The operational definition can be made within the text of the test method ... it is out of context in the terms and definition section.	Change text to, “a process in which a product weakens, loses integrity, and breaks into smaller fragments as a result of exposure to physical forces and/or biological activity.”	Accepted.
73	GHC	204– 210	5.2.2	Disintegra- tion	ED	Change text as described. opposite	Edit text to read: --“a process in which a product weakens, loses integrity, and breaks into smaller parts because of exposure to physical forces and or biological activity.”	Accepted.
74	LZ	204- 210	5.2.2.	Disintegra- tion	Te	There is only one definition for “Disintegration” in ISO 14855-1 and ISO 17088 which describes the physical break down of a material into very small fragments. These are related to biological disintegration. There is no standard definition for disintegration e.g. Slosh-Box disintegration.	Change text to: A process in which a product weakens, loses integrity, and breaks into smaller parts Remove NOTES	Not accepted.
75	NP	206-207	5.2.2.	Disintegra- tion	Te	Statement indicates that disintegration can occur by exposure to physical forces or biological action. In this definition, it has to be one or the other.	Please clarify.	Not accepted. No reference to the PAS.
76	NP	208-210	5.2.2.	Disintegra- tion	Ge	It states it is operationally defined by mass loss. It is unclear what is rationale or reference for this definition. Is this definition based on INDA/EDANA guidelines.	Please state reference and rationale.	Not accepted. No reference to the PAS.
77	NP	211-214	5.2.3.	Re		Improper definition.	Change to “A dimensionless quantity used in fluid mechanics to help predict flow patterns in different fluid flow situations, such as transitions from laminar to turbulent flow in pipes.”	Not accepted.

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78	KCC	211-218			Te	Incorrect definition for Reynolds Number	Delete text Suggest finding a proper definition, there are many good references for this including dictionaries	Not accepted.
79	INDA	212-214			TE	Confusing definition.	Use “A dimensionless quantity used in fluid mechanics to help predict flow patterns in different fluid flow situations, such as transitions from laminar to turbulent flow in pipes.”	Not accepted.
80	KCC	212			Te	“Dimensionless group of variables” – incorrect The variables used in the determination of Reynolds Number have dimensions The Reynolds number is dimensionless	Find proper definition – see previous comment	Not accepted.
81	GHC	212-214	5.2.3	Reynolds number	TE	Change definition	Edit to read to Reynolds Number (Re) “A dimensionless quantity used in fluid mechanics to help predict flow patterns in different fluid flow situations, such as transitions from laminar to turbulent flow in pipes.”	Not accepted.
82	PG	221	5.2.4	Residues	Te	Vague. It is unclear what is being defined here. Sand would be a residue from the erosion of rock, for example.	Revise with a definition and an appropriate reference.	Accepted.
83	INDA	231-234			ED	Confusing wording.	Change text to, “substances used within or on the substrate, such as bonding agents or lotions, to achieve an intended purpose including improved wet strength, smoothness, disinfection, or topical treatment.” Remove the added note.	Accepted.

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84	ANON 1	231-234			ED	Confusing wording.	Change text to, “substances used within or on the substrate, such as bonding agents or lotions, to achieve an intended purpose including improved wet strength, smoothness, disinfection, or topical treatment.” Remove the added note.	Accepted.
85	LZ	231- 234	5.3.1.	Applied Substances	ED	Sentence is not clear.	Use different wording for the clarity and avoiding misunderstanding.	Accepted.
86	INDA	235-238			TE	Dry Tissues. This definition is nonsensical for use to describe “dry tissues” such as toilet paper and facial tissues. The ISO Source mentioned describes “absolute dry timber”.  I believe you are referring to articles that do not contain added moisture or lotions to differentiate from a “wet wipe” or “moist toilet tissue”.	Please use an alternative and more appropriate definition.	Accepted.
87	ANON 1	235- 238			TE	Dry Tissues. This definition is nonsensical for use to describe “dry tissues” such as toilet paper and facial tissues. The ISO Source mentioned describes “absolute dry timber”.  We believe you are referring to articles that do not contain added moisture or lotions to differentiate from a “wet wipe” or “moist toilet tissue”.	Please use an alternative and more appropriate definition.	Accepted.
88	PG	235-238	5.3.2	Dry Tissues	Te	Reference refers to lumber	Revise with relevant reference	Accepted.

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89	LZ	235-238	5.3.2.	Dry Tissues	Te	ISO 24294:2013 is a standard for Timber — Round and sawn timber Vocabulary. Point 6.14 in the ISO 24294:2013 describes absolute dry timber, oven dry timber, oven dry wood, en CA US, timber (3.2) that contains neither free moisture (6.2) nor bound moisture (6.3). ISO 24294:2013 does not define any dry tissues. There are also no definitions for dry tissues in ISO 12625-1:2011 “Tissue Paper and Tissue Products”.	Add an international standard definition for the term “Dry Tissues” or remove 5.3.2.	Accepted.
90	GHC	235-238	5.3.2	Dry tissue	TE	Clarify your definition and the context of the source	Redefine	Accepted.
91	KCC	235-238			Te	Dry Tissues (toilet tissue or facial tissue) will contain a low level of free moisture from the air	Find alternate definition which is correct	Accepted.
92(a)	AF&PA	235, 259, 298	5.3.2, 5.3.5, 5.3.12		Te	It is our understanding that this draft standard is under development to address nonwoven wipes. Tissue, Moist Tissue, and Dry Tissue should be removed from the standard as out of scope.	Remove the definition and all of the references in the standard and the draft standard to tissue, moist tissue and dry tissue.	Not accepted.
92(b)	INDA	240-242			TE	Semen and mucus are not considered excreta. Feces, urine, and sweat are considered excreta. Semen and mucus are not “waste products”.	Remove mention of semen and mucus in this definition.	Accepted.

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93	GHC	240-242	5.3.3	Excreta	TE	Faeces, urine, and sweat are examples of excreta. Semen and mucus not excreta!	Remove semen and mucus from the definition.	Accepted.
94	KCC	240-242			ED	Semen is not excreta Vomit is excreta	Remove semen Include Vomit	Accepted.
95	FAD	240-242	5.3.3.		Ge	Definition doesn't include other bodily wastes such as blood and vomitus; the term "waste products" is a sort of oxymoron; excreta should be recognized only from humans, to specifically exclude other animal wastes	Waste matter eliminated or separated from human body functions such as sweat, urine, feces, blood, semen, mucous and vomitus.	Accepted.
96	PG	241-242	5.3.3	Excreta	Te	Unreferenced.	Provide reference.	Not accepted.
97	INDA	244-257			GE	The definition of a "flushable product" here seems circular since it would appear that this entire document is for defining what flushable is. I would suggest this definition be removed. Alternatively, a definition of "Flushable" Product could be made whereby the term flushable can be defined as a marketing term meaning a product which is intended to be disposed of via a toilet . . . . This would be as opposed to a flushable material which in many media articles appears to be defined as something that can pass through a toilet.	Remove definition.	Not accepted. Note, change unrecognizable to recognizable
98	NP	244-257	5.3.4.	Flushable Product	Ge	Definition is circular using draft standard in the very definition. In addition, there is evidence that currently marketed flushable products do not materially adversely impact those systems. Reference NYC 2016 study and Perry settlement.	Please clarify definition. Please reconcile evidence that clearly shows compatibility with various systems yet statements that no current flushable wipe would meet this standard.	Not accepted. No reference to the PAS.
99	GHC	244-257	5.3.4	Flushable product	GE	The definition needs a total re-write. It is contradictory. E.g. because it will not (b) be unrecognizable in effluent	Remove this definition. Redefine more appropriately this is such a key concept.	Not accepted. No reference to the PAS.

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100	GT	244-257	5.3.4		Te	<p>Given that IWSFG has created several detailed documents attempting to establish criteria for what constitutes a “flushable” product, any effort to summarize all of that information in a single short definition is inappropriate and will create inconsistencies with the balance of the document.</p> <p>For example, meeting the criteria in IWFSG Standard 1:2017 is merely a “note” to explain what is meant by “suitable,” implying that meeting the fundamental standard established by IWFSG is insufficient: one must also conform to the balance of the definition in addition to conforming with the standard.</p> <p>The phrase “materially adversely impact those systems” is vague and ambiguous and is not something that one can test against. A product could meet all of the criteria established by IWSFG yet still “materially adversely impact” a system somewhere in the world, since there is such a vast variety of systems. The term “materially” is also not defined. This phrase introduces an entirely different and subjective criterion than the criteria in IWFSG Standard 1.</p> <p>The collection of IWFSG documents have not established an evidentiary, scientific or technical basis for the criterion that the product should be “unrecognizable” in effluent (e.g., no scientific and statistically significant evidence has been presented that some specific quantum of “recognizability” is causally related to blockages). Further, the term “recognizable” is not defined, nor is the method for determining whether the material is recognizable. By the experienced eye of a trained professional? Using some type of instrument? Just how much does one have to detect or see before one</p>	Delete 5.3.4	Not accepted.

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						reaches the conclusion that the material has become “recognizable?”  The notes contain two descriptions for suitable: one tied to the IWSDG Standard 1, the other saying that suitable means “being contaminated with excreta.” Does this mean that if one flushes dry, unused toilet paper down the toilet that the toilet paper was “unflushable?” What if a glass of water was spilled in the bathroom and wiped up with tissue; is the tissue “unflushable?”  For all these reasons, this definition contains far too many internal inconsistencies and ambiguities and should be deleted.		
101	LZ	244-257	5.3.4.	Flushable Product	Te, Ge	What is the reason to have a new definition for “Flushable Product” in the IWSFG documents? Flushable Products are defined in the second version of INDA/EDANA Code of Practice published in April 2017 which was agreed between nonwovens industries, water and waste water associations in US.	To get the same understanding and clarity across the entire nonwoven industries, water and waste water associations about flushable products, it is recommended to use the same language and wording for “Flushable Products” as explained in the second version of INDA/EDANA Code of Practice published in April 2017.	Not accepted. COP does not contain a definition of flushable products
102	PG	245-247	5.3.4	Flushable Product	Te	Unreferenced use of definition from dictionary ( <a href="https://www.merriam-webster.com/dictionary/flushable">https://www.merriam-webster.com/dictionary/flushable</a> ). Note appropriate definitions are included in both: Guidelines Document for Assessing the Flushability of Nonwoven Disposable Products, INDA/EDANA Editions 1, 2 and 3, 2008, 2009 and 2013 respectively; and, Protocols to Assess the Breakdown of Flushable Consumer Products, Procter & Gamble Company, Winton Hill Technical Centre, Water Environment Foundation (Co-published with IWA Publishing), 2003.	Delete “is considered suitable for disposal via a toilet and drain line to an on-site treatment system or to a wastewater collection system and a wastewater treatment system because it”. Utilize an appropriate resource for the definition.	Accepted. Reword as GD2 example and reference.

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103	PG	245-257	5.3.4	Flushable Product	Te	Vague and contradictory definitions. Alternate definitions of the word “suitable” presented here are IWSFG’s misappropriation of the term, not actual meanings of the word, and should be noted as such.	Revise and clarify definition of “suitable.”	See comment 102.
104	JHI	244-257			GE	Definition of Flushable Product seems unnecessary as the test methods will define what is flushable. The wording is also confusing in line 249-251.	Take the definition out or just change it to a product that has met the criteria defined in Standard 1	See comment 102.
105	FAD	249	5.3.4		Ge	The term “unrecognizable” may need refinement, so as to exclude erroneous interpretations of the term. For example, a person could interpret a visible white particle with suspected characteristics of wipes material, but it’s not definitively identifiable  A reference to size with the term may help refine	“be unrecognizable to the naked eye in its size in effluent upon leaving on-site and municipal wastewater treatment systems . . . Or “be unrecognizable by laboratory methods and tests for measurement of common effluent characteristics” Or “be undetectable by laboratory methods and tests for measurement of common effluent characteristics”	Reword with flushable definition
106	PG	252-255	5.3.4	Flushable Product	Te	Vague and contradictory definitions. Redefining the word “suitable” by IWSFG twice with such divergent language is misleading. “Suitable” does not mean a product that meets the criteria in IWSFG Standard 1, according to the IWSFG document, the word “Flushable” does. Per this definition, the word “Suitable” would be put on the labels of flushable products, not the word “flushable.”	Revise and clarify definition of “suitable.”	Not accepted.

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107	PG	255	5.3.4	Flushable Product	Te	Contradictory. Implies that “suitable” products are any product that is contaminated with excreta. If so, then any product that is simply contaminated with excreta would be flushable, if shown to not materially adversely impact systems, and be unrecognizable in effluent, as defined herein.	Revise and clarify definition of “suitable.”	Not accepted.
108	WSL NZ	255	5.3.4			Flushable Product: The statement in Note 2: “Suitable means being contaminated with excreta” may need clarification as it is unclear what this is referring to.		Not accepted. No reference to the PAS.
109	LZ	259- 265	5.3.5.	Moist Tissues	Te	ISO 24294:2013 is a standard for Timber — Round and sawn timber Vocabulary Point 6.14 in the ISO 24294:2013 describes absolute dry timber, oven dry timber, oven dry wood, en CA US, timber (3.2) that contains neither free moisture (6.2) nor bound moisture (6.3). ISO 24294:2013 does not define any moist tissues. There is also no definition for moist tissues in ISO12625-1:2011	Add an international standard definition for “Moist Tissues” or remove chapter 5.3.5.	Reword and delete all words after ‘substance
110	INDA	260-261			TE	Most materials have some level of moisture present. Where does “free of moisture” come from in defining a moist tissue ? Applied substances are defined. Remove Note.	Please use an alternative and more appropriate definition.	See comment 109.
111	ANON 1	260- 261			TE	Most materials have some level of moisture present. Where does “free of moisture” come from in defining a moist tissue? Applied substances are defined. Remove Note.	Please use an alternative and more appropriate definition.	See comment 109.

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112	WSL NZ	260	5.3.5			Moist Tissues: Moist tissues are defined as tissues coated with a substance that is free of moisture. To have a moist tissue that is free of moisture does not make sense.		Not accepted. No reference to the PAS.
113	GT	260-261	5.3.5		Te	It is counter-intuitive to state that “moist tissues” are “free of moisture.” Perhaps what was intended was that moist tissues do not contain “free liquids,” since they are clearly intended to be “moist.”	Replace “that is free of moisture” with “that does not contain free liquids.”	See comment 109.
114	GHC	260-261	5.3.5	Moist Tissue	TE	This definition is confusing.	Please redefine	See comment 109.
115	NP	260-261	5.3.5	Moist tissues		This language is unclear and not common terminology.	Please clarify.	See comment 109.
116	NP	274	5.3.7	Primary Packaging	Ge	The reference to toothpaste in primary packaging seems odd and unrelated to products in scope.	Please clarify.	Accepted. Example removed.
117	NP	296-27	5.3.11	Substrate		This language is not common terminology.	Please include stakeholders with knowledge/expertise in this area to provide commonly accepted terms and definitions.	Not accepted. No reference to the PAS.

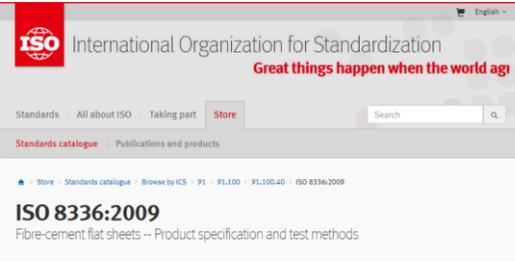
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118	LZ	298-304	5.3.12	Tissue	Te	This chapter does not explain moist toilet tissues or wipes. Substrates of moist toilet tissues and wet wipes are nonwoven fabrics. ISO 12625-1:2011 is an ISO standard for Tissue paper and Tissue products. Chapter 4.6 in ISO 12625-1:2011 describes base paper. According to the ISO 12625-1:2011 3.0 "General principles for the use of the term "tissue" nonwovens are not classified as tissue, even if one subgroup of the nonwovens is manufactured in a wet-laid manner according to a process similar to the tissue making process.	Remove chapter 5.3.12.	Not accepted.
119	KCC	299			ED	Define "lightweight"	Needs clarification or deletion	Not accepted.
120	KCC				ED	Note 2 – Make no sense	Delete Note 2 – add definition of Moist Tissues	Not accepted.
121	NP	302	5.3.12	Tissues		This language is not common terminology.	Please include stakeholders with knowledge/expertise in this area to provide commonly accepted terms and definitions.	Not accepted. No reference to the PAS.
122	AF&PA	305	5.3.13		Te	Toilet paper is outside the scope of this standard	Remove the definition of toilet paper and any references to it in the standard and the PAS's.	Partially accepted. Toilet paper is removed from scope but is still defined and referenced.
123	LZ	305-308	5.3.13	Toilet Paper	Ge	Why toilet papers need to be added in IWSFG documents? If toilet paper is part of the term "Dry Tissues" (see section 5.3.2) why there is a need to define again toilet paper?	Explain the reasons to have toilet paper in this document. Note: ISO TC6 working groups are focused on topics with papers, boards and pulp. Clarify if toilet paper is part of the dry tissues. Make consistent content in 5.3.2. and 5.3.13 or remove chapter 5.3.13.	Not accepted. No reference to the PAS.

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124	KCC	309			ED	Missing definition of Moist tissues		Not accepted.
125	INDA	311-320			GE	Definitions such as these should be made within the test method. Individual test methods may have different definitions associated with these terms.	Remove 5.4.1 and 5.4.2. Define within the test methods.	Accepted.
126	NP	311-313	5.4.1	Acquisition		Requiring third party labs to purchase multiple randomly selected packs in various markets could place undue stress on labs without access to those markets. Need to define random. Requiring product from multiple lots or produced on multiple dates. Labs are not prepared to gather a random sample of product that covers multiple production lots.	Please provide more clarity on how to address this concern.	See comment 125
127	PG	312-313	5.4.1	Acquisition	Ge	Confirm that the testing laboratory is responsible for obtaining all samples to test.	Clarify and provide guidance for how a laboratory located in North America can acquire a sample from Asia, for example.	See comment 126.
128	GHC	318-320	5.4.2	Ambient laboratory conditions	GE	These can vary depending upon what is specified in individual test protocols	Remove 5.4.2	See comment 125.

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129	KCC	319-320			TE/ED	<p>Check conditions Not consistent with Tappi Lab 33C is a very warm lab? Check reference – it appears to be related to concrete?</p> 	Check	See comment 125.
130	KCC	323-324				Note does not add anything to the definition	Delete note	Accepted.
131	JHI	334	5.4.5		GE	Previously tested products is not really a definition – this may be more useful highlighted in the test methods.	Remove from this document	See comment 125.
132	INDA	334-338			ED	This is not a definition but an instruction. Should be made clear within the test method and not in the definitions section.	Remove definition. Define within the test methods.	See comment 125.
133	KCC	334-338			ED	This is an instruction. This should be included within the test method and not in the definitions section.	Remove and move to appropriate method(s)	See comment 125.

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134	GT	335	5.4.5		Te	<p>It is not clear why a definition of “previously tested products” is necessary. It is generally considered unnecessary to define (or re-define) commonly used terms.</p> <p>Further, the proposed definition is confusing. Why does a test have to be “successful” for the product to have been “previously tested?” Wouldn’t the residuals from an unsuccessful test also be “previously tested?” If the point is that one might only want to use the residuals from a successful test in a subsequent test, that should be covered in the narrative, not the definition. E.g., “if the outcome of test X is successful, the product test residuals may be used in text Y.”</p> <p>It is also not clear why “previously tested product” is limited solely to “residuals.” If the point here is to refer to not the product generally (i.e., X units of product Y were tested, thus product Y is “previously tested”), but literally to the remnants of the specific product that was tested, then it would be more clear to use a different term, for this definition, such as “Product Test Residuals”</p>	<p>Delete 5.4.5.</p> <p>Or consider this as an alternative: “Product Test Residuals” Residuals recovered from the test of a product. [Though, again, this seems unnecessary since it is self-evident]</p>	See comment 133.
135	AF& PA	339	5.4.6		Te	<p>Regenerated cellulose is outside the scope of this standard, particularly given that the UNEP has not included them in their report on marine plastics (which was the stated basis for including it in this standard). There is no scientifically based support for including regenerated cellulose within this standard</p>	<p>Remove the definition of regenerated cellulose and any references to it in the standard or PAS’s.</p>	Not accepted.

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136	PG	339	5.4.6	Regenerat- ed Cellulose	Ge	Vague and inappropriate reference.	Revise with relevant reference specific to definition.	Not accepted.
137	LZ	339- 343	5.4.6	Regenerat- ed Cellulose	Te	There are no scientific facts and references to show the non-biodegradability of viscose/rayon in the range of natural environments and it's negative impact on the environment. Therefore, no need to add the term "regenerated cellulose" in the PAS 0 (see Lenzing's comments for chapter 7.2.2. in PAS 1).	Remove chapter 5.4.6.	Not accepted.
138	INDA	340-341			TE	Improper use of terms rayon and lyocell. Rayon and Tencel are brand names. Viscose and Lyocell are processes used to make those fibers.	Use this definition adapted from Wikipedia. "Regenerated cellulose is a class of materials manufactured by the conversion of natural cellulose to a soluble cellulosic derivative and subsequent regeneration, typically forming either a fiber (via polymer spinning) or a film (via polymer casting). Processes include the viscose process and the lyocell process."  There may be better definitions included in comments from the manufacturers of these fibers like Lenzing and Kelheim.	Not accepted.
139	ANON 1	340- 343	5.4.6		TE	A definition regarding Plastics is used.	Use a correct fiber definition.	Not accepted.

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140	KCC	340-341			TE	Poor definition. Rayon is a brand name. Viscose is a process used to make those fibers.	Find alternate definition	Not accepted.
141	GHC	340-341	5.4.6	Regenerat- ed Cellulose	TE	The Viscose process and the Lyocell process are means of manufacture of regenerated cellulose fibres.	Clarify definition	Not accepted.
142	KCC		5.4.7			Is this necessary		Not accepted. No reference to the PAS.
143	NP	344-346	5.4.7	Specifica- tion		Why is a reference for thermal performance of doors and windows use for this product category?	Please use appropriate reference.	Not accepted.
144	JHI	347	5.4.8			Unit Size here is not really a definition	Change to define unit size as the size of the sample needed for a particular test or take it out entirely and reference the size in the individual test documents.	Not accepted.
145	GT	347-354			Te	This is not a definition; rather, it is simply a direction to go look in other documents.	Delete 5.4.8	Partially accepted. Provide clear definition of unit size
146	LZ	345- 346	5.4.7.	Specifica- tion	Ed	What is the reason to cite an ISO reference?	Remove line 346	Not accepted.
147	LZ	348- 354	354 5.4.8.	Unit Size	Ed	There is no definition here. Dry tissues, facial tissues and moist tissues are mentioned without any international standard definition for those terms.	Define the unit size. Define dry tissues, moist tissues, facial tissues based on existing international standards. If there are no standards to define those products terms, define only the unit size and remove the lines 351 – 355.	See comment 145
148	KCC	348-354			ED	Not a definition		Not accepted. No reference to the PAS.

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149	GHC	348-354	4.4.8	UNIT SIZE	ED	This is not a definition- it is an instruction where to find?	Delete.	Not accepted.
150	INDA	345-346			ED	There is no reason to cite an ISO reference for a definition of "specification", especially when the citation is for windows and doors.	Remove line 346.	Not accepted.
151	INDA	348-354			ED	There is no definition currently in the text. Put the specific unit size requirements within each test method.	Use, for example, "A unit size is a predetermined size of material used within a test method. Different materials each have different unit sizes."	See comment 145
152	WC	355	5.4		Te	The definition of "wipes" should be included	5.4.9 Wipes - see tissues definition	Not accepted.
153	LZ			Plastics	Ge	In PAS 1 the term plastics is used, but there is no definition for plastics in PAS 0.	Add an international standard definition for plastics according to the existing standards such as ISO 472:2013, Plastics - Vocabulary	Accepted.
154								
155								

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## **Initials for Public Comments**

AFGC – Australian Food & Grocery Council  
AF&PA – American Forest & Paper Association  
ANNA – All Nippon Nonwovens Association  
ANON1 – Anonymous commenter #1  
ANON2 – Anonymous commenter #2  
CCWES – Clackamas County Water Environment Services  
CG – City of Gresham  
CO – City of Olympia  
CWS – Clean Water Services  
DPI – DPI Water  
EDANA – EDANA  
FAD – City of Vancouver  
FCPC – Food and Consumer Products of Canada  
GHC – GammaHealthcare Ltd.  
GIL – Grasim Industries Ltd.  
GP – Georgia-Pacific Consumer Products  
GT – GreenbergTraurig  
INDA – INDA, Association of the Nonwoven Fabrics Industry  
JCFA – Japan Chemical Fibers Association  
JHI – Jacob Holm Industries  
JHPIA – Japan Hygiene Products Industry Association  
KCC – Kimberly-Clark Corporation  
KFG – Kelheim Fibres GmbH  
LZ – Lenzing Aktiengesellschaft  
MW – Midcoast Water  
NP – NicePak Products, Inc.  
NYC – New York City Department of Environmental Protection  
PG – Procter & Gamble  
SGS-IPS – SGS – IPS Testing  
SUO – Suominen  
WC – Water Corporation  
WSL NZ – Watercare Services Ltd, New Zealand