

Initials	Line number (e.g. 17)	Clause/ Subclause (e.g. 3.1)	Paragraph/ Figure/ Table/ (e.g. Table 1)	Type of comment <sup>2</sup>	Comments	Proposed change	Observations of the secretariat
Stan dard 1.				Ge	<p>Comment submission doesn't mean participation in developing IWSFG standard and PAS test.</p> <p>We strongly disagree with developing standard.</p>	Objection	
Stand ard 1				Gel	<p>We believe that this whole document should be "guideline", but not a standard nor publicly available specification.</p> <p>Rename this document as "Guideline"</p> <p>Eventually, words "require" throughout this document should be rephrased to "recommend" or other equivalent word.</p> <p><i>Although we oppose this Standard as stated above, we provide the following comments on rayon, etc.</i></p>	<p>This whole document should be "guideline"</p> <p>Rename this document as "Guideline."</p>	
Stand ard 1	181-182	6.2	table	Ge Te Ed	<p>"PAS 2C is recommended PAS"</p> <p>Please provide reason why this is "recommended" unlike 2A and 2B.</p> <p>Please remove this PAS 2C</p>	Please delete PAS 2C	
Stand ard 1	184-187	6.3		Ge Ed	Please provide list of ISO 17025:2005 certified labs where could conduct all PAS tests.	Please provide list of ISO 17025:2005 certified labs	

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PAS1	99	7.2		Ge Te	The "substrates" in this section should be deleted, since the basic principle stating that plastic lacking biodegradability must not be used, is found in the test procedures.	The "substrates" in this section (on Standard-1 and PAS-1) should be deleted.	
Stand ard 1  &  PAS 1	235   103	7.1.3   7.2.2		Ge Te	<p>Standard-1:7.1.3, PAS-1: 7.2.2  <b>【Regenerated Cellulose Fibers】</b>                      Rayon is regenerated cellulose fibers made mainly from wood pulp.                      Therefore, it has a superior biodegradability, and easily decomposes by the bacteria on the ground and in the soil. Even in the event of incineration, it does not produce toxic gas.                      The rayon, grown as a plant and returned to nature, has not had a major impact on environmental pollution. It is highly safe and also has broadly been used , being acknowledged as eco-friendly recyclable fiber .                      Unlike plastic fiber or synthetic fiber such as polyester or nylon fiber, rayon has been identified as a fiber equivalent to pulp in an academia.                      Hence, section Standard-1 7.1.3 and PAS-1 7.2.2 should be deleted to avoid restricting the use of regenerated cellulose fibers without sufficient scientific rational behind.</p> <p>Regenerated cellulose fibers should be treated equally to pulp in this guideline with following reasons</p> <p style="text-align: center;">{Continued on next page}</p>	Section of Standard-1: 7.1.3 and PAS-1: 7.2.2 should be deleted	

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					<p>1)[Confusion between plastic and regenerated cellulose]</p> <p>Throughout this paper, regenerated cellulose has been treated the same as microplastic which is seen as a potential cause to ruin aquatic food chain. Plastics and regenerated cellulose are completely different material from different origin, and various environmental properties such as biodegradability are also completely different. Regenerated cellulose should not be considered in the aposition with plastic.</p> <p>2) [ Pulp used for rayon and toilet paper] It has excellent biodegradability with minimal environmental effect to wastewater. The difference comes from the degree of refinement between pulp and rayon. Rayon has a higher degree of refinement than pulp, and it biodegrades more rapidly. We completely disagree to restrict regenerated cellulose while, allowing pulp to be contained in wastewater, as rayon biodegrades faster than pulp.</p> <p>3) [Biodegradability of Regenerated Cellulose Fibers (Rayon) ]</p> <p>Regenerated cellulose fibers made from wood pulp have superior biodegradability than pulp which is used as papermaking</p>		

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					<p>material. This is because regenerated cellulose fibers have superior biodegradability with a short cellulose chain length, less crystalline, and contain less insoluble impurities.</p> <p>4) [Regenerated cellulose fibers (rayon) contain little insoluble substance]</p> <p>Rayon is made from pulp which has the highest purity among wood pulp. The rayon fiber is fiber refined from the cellulose of pulp and it contains very little amount of impurities. It contains less impurities and insoluble matter than toilet paper. Also, cellulose has never been identified as a substance that can be categorized as plastic even after refinement, even academically, ever since rayon was introduced.</p> <p>5) [ Non-toxicity of rayon fiber]</p> <p>No oral toxicity has been reported in single dose oral toxicity tests on rats.</p> <p>6) [Potential contamination from laundry wastewater]</p> <p>It seems that comments on laundry wastewater were made based on wrong interpretation; selectively targeted only</p>		

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					rayon while the presence of other fibers such as synthetic fiber are not clearly demonstrated, and microplastic, microfiber and regenerated cellulose are treated as equivalent. With above reasons, we disagree to prohibit the use of regenerated cellulose as substrate.		
Standard 1	235	7.1.3		Ge,Te	Biodegradability of fibers should be addressed through PAS 5A, 5B. if products can pass biodegradability test, why do we need to set restriction on use of Regenerated cellulose fibers?	Delete	
Standard 1	292 - 294	7.3		Ge,Te	“maximum fragment size within the time set out from at least one of the 3 alternative tests”  Please delete and re-state criteria; This contradicts with PAS 3A, 3B, 3C pass/fail criteria.	Please delete and re-state criteria; This contradicts with PAS 3A, 3B, 3C pass/fail criteria.	
PAS 1	119	7.2.3		Ge, Te	7.2.3 [Test Method] In this test, it is not correct to identify "regenerated cellulose fibers that are made of plastic" as "synthetic".	Please delete "regenerated cellulose fibers that are made of plastic" as "synthetic".	
PAS3 A	129-142	6		Te	It contradicts with the fact that Biodegradation test will use wastewater	Remove the note	
PAS3 A	322	11		Ed	Missing “or” inbetween criteria a and b	Add “Or”	

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**IWSFG Template for Reviewer comments and IWSFG secretariat observations<sup>1</sup>**

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PAS 5A	235	10.2		Te	Testing cannot be carried out as instructed in 10.2 Test Procedure.	reexamination	

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Document reviewed: Japan Hygiene Products Industry Association

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