United States
Consumer Product Safety Commission

September 28, 2023

Transmitted Via Email
Mr. Jeffrey Stull, ASTM F15.81 Subcommittee Chair
Mr. Rock Vitale, ASTM F15.81 Subcommittee Co-Chair
ASTM International
100 Barr Harbor Drive
West Conshohocken, PA 19428
jeffstull@intlperpro.com
rvitale@envstd.com

Re: Comment on ASTM Ballot F15.81 (23-01) *Standard Guide for Selecting and Applying Analytical Methods to Evaluate PFAS in Consumer and Related Products*. WK83798

Dear Mr. Stull and Mr. Vitale,

The U.S. Consumer Product Safety Commission (CPSC or Commission) staff[1] appreciates ASTM's efforts to develop a new standard guide regarding the analysis of PFAS in consumer and related products.

Staff reviewed the draft standard guide and generated a list of comments to submit along with our ballot response. All comments are included in the attached excel spreadsheet; a few of the more substantive comments are summarized below:

1) The scope section should be expanded to explicitly state what the guide does and does not cover. Alternatively, information could be added to the guide if certain items were intended to be in scope but are not yet present in the guide.
    a. The guide provides direction regarding how to measure PFAS content in consumer products and how to measure extractable PFAS content. Staff supports inclusion of extractable content in scope, but notes that there is a wide variety of environmental and biological matrices that are not fully described. Biological matrices such as saliva, sweat, sebum, and gastrointestinal fluid require consideration of temperature, pH, and other sampling conditions that would differ from environmental matrices such as water.
    b. The guide does not explicitly address sample preparation of non-solid consumer products. If the physical form of a consumer product is a liquid, guidance should be added describing any recommended dilution, agitation/sonication, and filtration steps prior to analysis. If the physical form of a consumer product is a semi-solid (e.g., waxes, viscous creams, polishes etc.), sample preparation for either liquid or solid products may be appropriate and should be described in the guide. Staff supports inclusion of more details describing sample preparation for different physical forms of consumer products.
    c. This guide does not provide information on how to measure PFAS emissions in air or parameters that inform mass-transfer from surfaces of products. Staff

[1] The views or opinions expressed in this letter are solely those of the staff, and these views and opinions do not necessarily represent those of the Commission.

supports excluding this from the scope of this guide and encourage ASTM D22.05's indoor air subcommittee to continue efforts to develop these standards.

2) The written definition of consumer products invokes the Consumer Product Safety Act (CPSA) definition of consumer products. Staff appreciates consideration of the CPSA statute for defining consumer products. The guide introduces a new term "related products." This term is not defined. CPSC staff recommends including a definition for related products that considers additional statutes, and describes how this term differs from the CPSA definition of consumer products.

3) The written definition of per- and polyfluoroalkyl substances (PFAS) includes the term "polymeric" even though not all PFAS are polymeric in nature. CPSC staff recommends changing this definition to "a group of manufactured chemicals, both polymeric and non-polymeric, consisting of carbon chains bonded to fluorine atoms, usually with a polar functional group at the head." CPSC staff recommend adding an appendix with a list of specific PFAS chemicals with CAS-RNs and other chemical identifiers that can be analyzed with different methods described in this guide.

The Commission recently published a Federal Register (FR) notice of availability and request for information (RFI) on PFAS[2]. The FR describes a contractor report on PFAS written by RTI International titled, "Characterizing PFAS Chemistries, Sources, Uses, and Regulatory Trends in U.S. and International Markets." The FR notice provides links to this report and several supplementary files. The RFI includes questions related to available data sources that describe potential use or presence of PFAS in consumer products, potential human exposures to PFAS associated with consumer product use including information about highly exposed population groups, and potential adverse human health effects informed by toxicological data sources.

CPSC staff invites subcommittee F15.81 to use this report in any manner which may be helpful to the further development of this standard guide. CPSC staff encourages submissions from ASTM, ASTM task group members, and ASTM subcommittee members during the public comment period of the request for information.

CPSC staff appreciates this opportunity to comment on the draft standard guide. We support the publication of this guide, with the attached comments addressed, as a positive step forward in the analysis of PFAS in consumer products.

Sincerely,

L. Carter Bosse
Chemist
Division of Laboratory Sciences Chemistry
Directorate for Laboratory Sciences

cc: Molly Lynyak, ASTM F15 Staff Manager
Jacqueline Campbell, CPSC Voluntary Standards Coordinator

U.S. Consumer Product Safety Commission
4330 East-West Highway
Bethesda, MD 20814
cpsc.gov

National Product Testing & Evaluation Center
5 Research Place
Rockville, MD 20850

[2] https://www.regulations.gov/search?filter=CPSC-2023-0033

Comment Sheet for Voting on **ASTM WK83978, Standard Guide for Selecting and Applying Analytical Methods to Evaluate PFAS in Consumer and Related Products**

Member	Organization	Para. No, Figure, or Table	Page	Line	Comment Type*	Comment	Proposed Change
Staff	U.S. Consumer Product Safety Commission	n/a	n/a	n/a	n/a	Selecting and Applying Analytical Methods to Evaluate PFAS **content and extractable PFAS** in Consumer and Related Product**s**	Title change should reflect measuring product content and also extractable PFAS. Existing title is broad.
Staff	U.S. Consumer Product Safety Commission	n/a	n/a	n/a	n/a	Add a scope subsection that explicity says what this guide does and does not cover.	New scope subsection: This guide provides information on how to measure PFAS content in consumer products and how to measure extracted PFAS in matrices such as saliva, sweat, or water from consumer products. This guide does not provide information on how to measure PFAS emissions to air or parameters that inform mass-transfer from surfaces of products.
Staff	U.S. Consumer Product Safety Commission	1.4	1	41	Technical	This guide does not address all aspects of risk assessment.	"used in preparing ~~a risk assessment~~ **an exposure assessment**"
Staff	U.S. Consumer Product Safety Commission	3.1.4	3	109	Technical	New 3.1.4, "aqueous film forming foam (AFFF)" needs to be inserted (and defined). The acronym AFFF is used both in Figure 1 (page 7, line 318) and Table 2 (top of page 19) without being defined.	define AFFF.
Staff	U.S. Consumer Product Safety Commission	3.1.5	3	115	Technical	CPSA definition (add statute citation). Related products is included as a term but not defined. Define related products if meant to be different from CPSA definition of consumer products.	add citation for CPSA statute. Define related products.
Staff	U.S. Consumer Product Safety Commission	3.1.13.1	3	139	Editorial	leaching is also often referred to as migration	add synonymns for related terms in defintions
Staff	U.S. Consumer Product Safety Commission	3.1.16	4	150	Technical	Not all substances consist of polymeric chains. Also include precusors | non-polymers, [See figure 2.2 White paper]	"a group of manufactured chemicals, both polymeric and non-polymeric, consisting of carbon chains bonded to fluorine atoms, usually with a polar functional group at the head"
Staff	U.S. Consumer Product Safety Commission	n/a	n/a	n/a	Technical	Add definition for preparation or sample preparation or add as synonymns to "extraction technique" (line 122). Sample preparation is referred to often throughout the guide.	add new term and definition
Staff	U.S. Consumer Product Safety Commission	5.2	5	224	Editorial	"Project goals can also be referred to data quality objectives," insert "as" between "to" and "data"	editorial, see left.
Staff	U.S. Consumer Product Safety Commission	5.2.2.1	5	236	Editorial	Replace "this" with "the" or delete "this"	editorial, see left.

Staff	U.S. Consumer Product Safety Commission	5.2.2.2.1	6	246	Editorial	Replace "group of family of compounds" with "group or family of compounds" ?	editorial, see left.
Staff	U.S. Consumer Product Safety Commission	Note 2	6	258	Editorial	Replace "TOSCA" with "TSCA"	editorial, see left.
Staff	U.S. Consumer Product Safety Commission	Note 2	6	257-262	Technical	Also include TSCA reporting requirement TSCA 8A7 https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/tsca-section-8a7-reporting-and-recordkeeping	add new link to reporting requirements for PFAS
Staff	U.S. Consumer Product Safety Commission	5.3.3.2	6	266	Editorial	"very small" is subjective. Suggest replacing with a range if an exact number is not known. For example, 80-100.	define number of PFAS that can be analyzed
Staff	U.S. Consumer Product Safety Commission	5.2.4	6	272	Editorial	replace "the PFAS that comes out of the products" with "the amount of PFAS that leaches or migrates from the product over time"	prefer more technical language
Staff	U.S. Consumer Product Safety Commission	Figure 1	7	319	Technical	This figure is very general. Propose replacing or adding on with any or all of three alternative figures which have more detail. They are in publicly avilable CPSC reports.	see figures available in "CPSC PFAS White Paper" available at: https://www.cpsc.gov/Research--Statistics/Chemicals
Staff	U.S. Consumer Product Safety Commission	5.4.1.2	7	323	Editorial	change "PFAS are present are below" to "PFAS are present at below"	editorial, see left.
Staff	U.S. Consumer Product Safety Commission	5.4.2.2.	7	331	Technical	Also include mouth and/or saliva after skin.	editorial, see left.
Staff	U.S. Consumer Product Safety Commission	5.4.2.2	7	334	Technical	Between "heterogeneity." and "Items" add "This includes considering different colors of otherwise similar items as separate samples, as different colors indicate different manufactured batches and different lots of at least some starting materials." - or similar.	include suggested language
Staff	U.S. Consumer Product Safety Commission	5.5.3.1.1	8	373	Technical	A mention should be made as to the value of "component part testing" here. That is, if suppliers of the individual component parts provide certified PFAS analysis, then with proper lot tracking, the PFAS content of the finished product is inherently known (barring some source from the manufacturing process/equipment itself).	include additional lanaguge
Staff	U.S. Consumer Product Safety Commission	5.7.1.2.2	9	430	Technical	A specific term for one blank that is subjected to the same collection, prep, and analysis would be an equipment blank or field blank (depending on sampling process)	add details on different types of blanks
Staff	U.S. Consumer Product Safety Commission	5.7.1.2.2	9	432-434	Technical	Specify the different types of blanks (equipment, field, trip, method, reagent, and instrument blanks). See "USEPA Region III Fact Sheet Quality Control Tools: Blanks" document for further explanation	add details on different types of blanks

Staff	U.S. Consumer Product Safety Commission	5.7.1.2.2	9	433-434	General	Separate positive controls into its own subsection. In addition to LCS, could also include matrix spike samples (MS).	include additional language.
Staff	U.S. Consumer Product Safety Commission	6.1.2	10	469	Technical	This section does not address sample preparation for liquids, semi-solids, waxes, etc., which can all be physical forms of PFAS containing consumer products. It only addresss solid articles and whether to manually cut them or use a cryomill.	include additional content and/or specifically exclude from scope.
Staff	U.S. Consumer Product Safety Commission	6.3.3	12	549	Technical	Consider broader term such as Migration Testing. Replace "into the environment" with "into the matrix of interest (e.g., saliva, sweat, water)	include suggested language
Staff	U.S. Consumer Product Safety Commission	6.3.3.1	12	551	Technical	Define SPLP and TCLP acronymns.	define terms
Staff	U.S. Consumer Product Safety Commission	6.3.3.2	12	554	Technical	organic solutions (e.g., saliva, sweat)	include additional examples.
Staff	U.S. Consumer Product Safety Commission	7.2.2.2, Fig 3	13	630	Technical	Fig 3., differentiation process insinuates that "Target PFAS" can be differntiated from "Unidentified Organofluorine," this is not the case for C-IC. Should figure be moved to better location? May recommend two separate Figures, demonstrating the varying possibilities on differentiation, as determined by the analytical method.	match figures to text | adjust figures
Staff	U.S. Consumer Product Safety Commission	7.2.3	13	634	Technical	add note that this technique will only give total fluorine, or mention same note as 7.2.2.2 for EOF (if the same applies to ISE)	Add additional note
Staff	U.S. Consumer Product Safety Commission	7.2.3.2	13-14	640-641	Editorial	First sentence of 7.2.3.2 reads awkwardly, needs editing. Specifically, "sample preparation" needs to be better linked to its verb "remains"	editorial, see left.
Staff	U.S. Consumer Product Safety Commission	7.2.4	14	645	Technical	perhaps mention that PIGE may be good for screening purposes as it is quick and requires little prep	
Staff	U.S. Consumer Product Safety Commission	7.2.4.3	14	652	Editorial	Add spacing between "7.2.4.3" and "PIGE"	editorial, see left.
Staff	U.S. Consumer Product Safety Commission	7.2.6.4	14	690	Editorial	Remove "a" from "As such, these a spectral database matching techniques can" reads awkward.	editorial, see left.
Staff	U.S. Consumer Product Safety Commission	7.3.4	15	734	Editorial	replace "that you" with "to"	editorial, see left.
Staff	U.S. Consumer Product Safety Commission	Table 2	16-21	n/a	Editorial	Look for simple typos like "Ssome" p.16, and instances of "users" where "user's" is correct.	editorial, see left.

Staff	U.S. Consumer Product Safety Commission	8.3.2	22	N/A	Editorial	replace "vide" with "wide"	editorial, see left.
Staff	U.S. Consumer Product Safety Commission	n/a	n/a	n/a	Technical	Add an appendix with Chemical identifiers, Chemical Names for chemicals that have analytical standards/methods for the standards listed on pages 16-21.	Add additional content. An appendix with PFAS chemicals that can be analyzed would be a valuable resource and would be updated in future revisions of the standard as methods develop.
Staff	U.S. Consumer Product Safety Commission	8.3.4	22	n/a	General	Please provide a source for the Level IV, III, II detail levels, so an informed reader understands where such nomenclature originates	provide additional explanation

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