UNITED STATES
CONSUMER PRODUCT SAFETY COMMISSION
4330 EAST WEST HIGHWAY
BETHESDA, MD 20814

This document has been electronically approved and signed.

DATE: March 17, 2021

BALLOT VOTE SHEET

TO: The Commission
Alberta E. Mills, Secretary

THROUGH: Jennifer Sultan, Acting General Counsel
Mary T. Boyle, Executive Director

FROM: Daniel Vice, Acting Assistant General Counsel, Regulatory Affairs
Mary A. House, Attorney, Regulatory Affairs

SUBJECT: ASTM's Revised Safety Standard for High Chairs

BALLOT VOTE DUE: Tuesday, March 23, 2021

Staff is forwarding to the Commission a briefing memorandum recommending that the Commission issue a direct final rule to update the ASTM standard incorporated by reference in the Safety Standard for High Chairs, codified at 16 CFR part 1231.

In 2018, the Commission issued a mandatory standard under the Consumer Product Safety Improvement Act of 2008 (CPSIA), incorporating by reference ASTM F404-18, *Standard Consumer Safety Specification for High Chairs*. Under the CPSIA, when ASTM revises a voluntary standard for a durable infant or toddler product that the Commission has incorporated by reference, the revised standard automatically becomes the mandatory standard, unless the Commission determines that the revised standard "does not improve the safety of the consumer product" and notifies the voluntary standards organization.

On April 3, 2019, ASTM notified the Commission that it published a revised standard for high chairs, ASTM F404-18a. On June 11, 2019, the Commission voted 5-0 to retain the existing mandatory standard for high chairs, because ASTM F404-18a exempted a subset of high chairs intended for infants who are unable to sit upright unassisted (birth to approximately 6 months of age) or weigh 20 lbs or less (reclined seat high chairs) from stability testing. The Commission directed staff to notify ASTM that the Commission: (1) has determined that the revised high chairs standard does not improve the safety of high chairs, and (2) is retaining the existing consumer product safety standard for high chairs, ASTM F404-18.

ASTM has again updated the voluntary standard for high chairs, issuing ASTM F404-20, to address concerns regarding stability testing for reclined seat high chairs. ASTM notified the Commission of the revised standard on January 4, 2021. Staff recommends that the Commission allow the revised voluntary standard to become the mandatory standard for high chairs, and publish a direct final rule to revise part 1231 to reference ASTM F404-20. Attached for

Commission consideration is a draft *Federal Register* notice for that purpose. If approved by the Commission, staff will send the notice to the *Federal Register* for publication after we receive approval of the incorporation by reference from the Office of the Federal Register.

Please indicate your vote on the following options:

I. Approve publication of the attached notice in the *Federal Register*, as drafted.

_____ _____
(Signature) (Date)

II. Approve publication of the attached notice in the *Federal Register*, with the specified changes.

_____

_____

_____

_____ _____
(Signature) (Date)

III. Do not approve publication of the attached notice in the *Federal Register*.

_____ _____
(Signature) (Date)

IV. Take other action specified below.

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_____

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_____ _____
(Signature) (Date)

Attachment: Draft *Federal Register* notice: Revisions to Safety Standard for High Chairs

[Billing Code 6355-01-P]

CONSUMER PRODUCT SAFETY COMMISSION

16 CFR Part 1231

[Docket No. CPSC-2015-0031]

Revisions to Safety Standard for High Chairs

AGENCY: Consumer Product Safety Commission.

ACTION: Direct final rule.

SUMMARY: In June 2018, the U.S. Consumer Product Safety Commission (CPSC) published a consumer product safety standard for high chairs under section 104 of the Consumer Product Safety Improvement Act of 2008 (CPSIA). The standard incorporated by reference the ASTM voluntary standard that was in effect for high chairs at the time. The CPSIA sets forth a process for updating mandatory standards for durable infant or toddler products that are based on a voluntary standard, when a voluntary standards organization revises the standard. Consistent with the CPSIA update process, the Commission previously rejected an ASTM update to the high chairs standard in June 2019, and retained the 2018 version of the voluntary standard as the mandatory standard. In December 2020, ASTM again published a revised voluntary standard for high chairs, and it notified the Commission of this revised standard in January 2021. This direct final rule updates the mandatory standard for high chairs to incorporate by reference ASTM's 2020 version of the voluntary standard for high chairs.

DATES: The rule is effective on July 3, 2021, unless CPSC receives a significant adverse comment by [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]. If CPSC receives such a comment, it will publish a notice in the *Federal Register,* withdrawing this direct final rule before its effective date. The incorporation

by reference of the publication listed in this rule is approved by the Director of the Federal Register as of July 3, 2021.

ADDRESSES: You can submit comments, identified by Docket No. CPSC-2015-0031, by any of the following methods:

Electronic Submissions: Submit electronic comments to the Federal eRulemaking Portal at: https://www.regulations.gov. Follow the instructions for submitting comments. CPSC typically does not accept comments submitted by electronic mail (e-mail), except through https://www.regulations.gov. CPSC encourages you to submit electronic comments by using the Federal eRulemaking Portal, as described above.

Mail/hand delivery/courier Written Submissions: Submit comments by mail/hand delivery/courier to: Division of the Secretariat, Consumer Product Safety Commission, Room 820, 4330 East West Highway, Bethesda, MD 20814; telephone: (301) 504-7479. Alternatively, as a temporary option during the COVID-19 pandemic, you can email such submissions to: cpsc-os@cpsc.gov.

Instructions: All submissions must include the agency name and docket number for this notice. CPSC may post all comments without change, including any personal identifiers, contact information, or other personal information provided, to: https://www.regulations.gov. Do not submit electronically: confidential business information, trade secret information, or other sensitive or protected information that you do not want to be available to the public. If you wish to submit such information, please submit it according to the instructions for mail/hand delivery/courier written submissions.

Docket: For access to the docket to read background documents or comments received, go to: https://www.regulations.gov, and insert the docket number, CPSC-2015-0031, into the "Search" box, and follow the prompts.

FOR FURTHER INFORMATION CONTACT: Keysha Walker, Compliance Officer, U.S. Consumer Product Safety Commission, 4330 East West Highway, Bethesda, MD 20814; telephone (301) 504-6820; email: kwalker@cpsc.gov.

SUPPLEMENTARY INFORMATION:

I. Background

A. Statutory Authority

Section 104(b)(1) of the CPSIA requires the Commission to assess the effectiveness of voluntary standards for durable infant or toddler products and adopt mandatory standards for these products. 15 U.S.C. 2056a(b)(1). The mandatory standard must be "substantially the same as" the voluntary standard, or it may be "more stringent than" the voluntary standard, if the Commission determines that more stringent requirements would further reduce the risk of injury associated with the product. *Id.*

Section 104(b)(4)(B) of the CPSIA specifies the process for when a voluntary standards organization revises a standard that the Commission incorporated by reference under section 104(b)(1). First, the voluntary standards organization must notify the Commission of the revision. Once the Commission receives this notification, the Commission may reject or accept the revised standard. The Commission may reject the revised standard by notifying the voluntary standards organization that it has determined that the revised standard does not improve the safety of the consumer product and that it is retaining the existing standard. When rejecting a revision, the Commission must notify the voluntary standards organization of this

determination within 90 days of receiving notice of the revision. If the Commission does not take this action to reject the revised standard, the revised voluntary standard will be considered a consumer product safety standard issued under section 9 of the Consumer Product Safety Act (15 U.S.C. 2058), effective 180 days after the Commission received notification of the revision (or a later date specified by the Commission in the Federal Register). 15 U.S.C. 2056a(b)(4)(B).

B. Safety Standard for High Chairs

In June 2018, under section 104(b)(1) of the CPSIA, the Commission adopted a mandatory rule for high chairs, codified in 16 CFR part 1231. The rule incorporated by reference ASTM F404-18, *Standard Consumer Safety Specification for High Chairs*, without modification. 83 FR 28358 (June 19, 2018). At the time the Commission published the final rule, ASTM F404-18 was the current version of the voluntary standard.

On April 3, 2019, ASTM notified CPSC that it had issued a revised standard for high chairs, ASTM F404-18a, which added a new subsection 6.5.1 to exempt high chairs intended for infants who are unable to sit upright unassisted (birth to approximately 6 months of age) or weigh 20 lbs or less (reclined seat high chairs) from sections 6.5.2. *Forward and Sideways Stability*, 6.5.3. *Rearward Stability*, and 6.5.4 *Stability with Child Climbing into Chair*. In accordance with the procedures set out in section 104(b)(4)(B) of the CPSIA, staff reviewed the revised standard to determine whether ASTM F404-18a improved the safety of high chairs. Staff concluded that the addition of subsection 6.5.1 was a substantive change to ASTM F404-18 that did not improve the safety of high chairs.

In the June 5, 2019 staff briefing memorandum, staff explained that the stability requirements in ASTM F404-18 address stability as the child occupant moves within and about the chair, and from external forces on the chair, such as sibling or caregiver interactions. ASTM

developed these stability requirements because high chairs are intended for use by mobile children, up to 3 years of age. ASTM's rationale for exempting reclined seat high chairs from stability requirements was that the test methods in ASTM F404-18 could not be conducted on these products, as required in the standard. Staff's briefing memorandum stated that ASTM's assertion that stability testing could not be done on reclined seat high chairs was inaccurate, because staff was able to test such products under the standard's existing stability requirements.

Staff's briefing memorandum also expressed concern that exempting high chairs and high chair accessories intended for children who are unable to sit upright unassisted (birth to approximately 6 months of age) from stability requirements was not consistent with other product standards that are intended for the same age group, such as bouncers and bassinets, which also are intended for young infants, but are tested to stability requirements to prevent tipovers. Tipover requirements in the bouncers and bassinets standards (16 CFR parts 1229 and 1218, respectively) are intended to address tipovers caused by the infant user moving within the product (bouncers), as well as external forces (bassinets), such as sibling or caregiver interactions with the product. Moreover, staff's review of high chair incident data showed that tipover incidents resulting from occupant movement within the high chair, or from external forces, such as a sibling or caregiver acting on the high chair, do occur with children 6 months and younger.

Based on staff's recommendation, the Commission voted *not* to adopt the revised voluntary standard and maintained the mandatory standard based on ASTM F404-18.[1] Staff notified ASTM of the Commission's decision to retain ASTM F404-18 on June 19, 2019.

[1] https://www.cpsc.gov/s3fs-public/Update%20to%20Voluntary%20Standard%20for%20High%20Chairs.pdf?5nvjyCgQrNh.pQhwmCtd85aQJjc2mohX

On January 4, 2021, ASTM notified CPSC that it had again revised the voluntary standard for high chairs, approving ASTM F404-20 on October 1, 2020.[2] As this preamble discusses, based on CPSC staff's review of ASTM F404-20,[3] the Commission will allow the revised voluntary standard to become the mandatory standard because the revised requirements in the voluntary standard either improve the safety of high chairs, or are safety neutral. Accordingly, by operation of law under section 104(b)(4)(B) of the CPSIA, ASTM F404-20 will become the mandatory consumer product safety standard for high chairs on July 3, 2021.[4] 15 U.S.C. 2056a(b)(4)(B). This direct final rule updates 16 CFR part 1231 to incorporate by reference the revised voluntary standard, ASTM F404-20.

II. Description of ASTM F404-20

The ASTM standard for high chairs includes performance requirements, test methods, and requirements for warning labels and instructional literature, to address hazards to infants and children associated with high chairs. ASTM has revised the voluntary standard for high chairs twice since ASTM F404-18, which is the current mandatory standard. Section I.B of this preamble explains that the Commission previously rejected a revised high chair voluntary standard, ASTM F404-18a, in 2019, because the standard exempted reclined seat high chair products from stability testing. The latest revision, ASTM F404-20, now includes stability testing for these products, developed in conjunction with CPSC staff. Accordingly, the

[2] ASTM published ASTM F404-20 in December 2020. Until the standard becomes effective on July 3, 2021, a read-only copy of ASTM's standard is available at: https://www.astm.org/CPSC.htm. After the effective date of the revised part 1231, ASTM F404-20 becomes the mandatory standard for high chairs, and it will be available, to read only, at: https://www.astm.org/READINGLIBRARY/.

[3] CPSC staff's briefing memorandum regarding ASTM F404-20 is available at: [INSERT LINK].

[4] The statute provides that if the Commission does not take action to reject a revised standard, the revised voluntary standard will be considered a consumer product safety standard issued under section 9 of the Consumer Product Safety Act (15 U.S.C. 2058), effective 180 days after the Commission received notification of the revision (or a later date specified by the Commission in the *Federal Register*). 15 U.S.C. 2056a(b)(4)(B). In this case, 180 days from the January 4, 2021 notice date is July 3, 2021.

Commission will allow ASTM F404-20 to become the mandatory standard, and is updating 16 CFR part 1231 to reference this most recent updated voluntary standard.

This section describes the changes in ASTM F404-20 compared to ASTM F404-18. On October 1, 2020, ASTM approved a revised version of the standard, ASTM F404-20. In accordance with CPSIA section 104(b)(4)(B), ASTM notified CPSC of this revision on January 4, 2021. ASTM F404-20 includes several substantive changes, several revisions to clarify existing requirements, and editorial revisions that do not alter substantive requirements in the standard or affect safety.

A. Substantive Revisions

ASTM F404-20 contains substantive revisions from the current mandatory standard to distinguish performance requirements and test methods for two types of high chairs: (1) "[h]igh chairs and high chair accessories that have adjustment positions that, per the manufacturer's instructions, are recommended for use only for children able to sit upright unassisted (approximately 6 months of age) or weighing more than 20 lb (9.1 kg)" (hereinafter referred to as upright seat high chairs) and (2) "[h]igh chairs and high chair accessories that have adjustment positions that are manufacturer's recommended use positions for use with children who are unable to sit upright unassisted (birth to approximately 6 months of age) or weigh 20 lb (9.1 kg) or less, when adjusted into the most onerous manufacturer's recommended use and/or adjustment position for each direction to be tested" (hereinafter referred to as reclined seat high chairs). Primarily, ASTM F404-20 provides new performance requirements and associated test methods to test the stability of reclined seat high chairs.

1. Performance Requirements

CPSC staff worked closely with ASTM to help develop new stability testing requirements for reclined seat high chair products. In November 2018, CPSC staff tested six reclined seat high chair products to proposed stability requirements from a manufacturer who expressed concerns about the ability to test reclined seat high chairs. In March 2019, CPSC staff hosted an ASTM reclined seat high chair task group meeting at CPSC's laboratory in Rockville, Maryland, where staff demonstrated testing on reclined seat high chair products. The task group decided to explore the idea of using the stability test from the bassinet and cradle standard to develop stability requirements for reclined seat high chair products because this test addresses the tip over hazard that was most concerning to both ASTM and CPSC staff: the interaction of a sibling or caregiver pulling on the reclined seat product. The task group presented the idea of developing a test for reclined seat high chairs that is similar to the bassinet stability testing at the ASTM subcommittee teleconference on April 4, 2019. This idea ultimately was the basis of the new stability requirements for reclined seat products in ASTM F404-20.

Substantively, ASTM F404-20 improves the safety of high chairs because it adds a new stability requirement and test method for reclined seat high chairs. Table 1 below summarizes the differences between ASTM-F404-18 and ASTM F404-20 with regard to stability testing in section 6.5 of ASTM F404 (changes are highlighted in bold).

Table 1 – Stability Performance Requirements: Comparison of F404-18 to F404-20

Section	F404-18	F404-20
6.5	*Stability*	*Stability*
6.5.1	*Forward and Sideways Stability*—A high chair shall not tip over when setup as defined in 7.7.2.1 – 7.7.2.3, and then when forces are applied in accordance with 7.7.2.4 and 7.7.2.5.	**High chairs and high chair accessories that have adjustment positions that, per the manufacturer's instructions, are recommended for use only for children able to sit upright unassisted (approximately 6 months of age) or weighing more than 20 lb (9.1 kg) shall comply with 6.5.1.1 to 6.5.1.3. in all those manufacturer's recommended use and adjustment positions.**
6.5.1.1		*Forward and Sideways Stability*—A high chair shall not tip over when setup as defined in 7.7.2.1 – 7.7.2.3, and then when forces are applied in accordance with 7.7.2.4 and 7.7.2.5.
6.5.1.2.		*Rearward Stability*—When setup as defined in 7.7.2.1– 7.7.2.3, and then tested in accordance with 7.7.2.6, the high chair shall have a Rearward Stability Index of 50 or more.
6.5.1.3		*Stability with Child Climbing into Chair*—A high chair shall not tip over when tested in accordance with 7.7.4
6.5.2	*Rearward Stability*—When setup as defined in 7.7.2.1– 7.7.2.3, and then tested in accordance with 7.7.2.6, the high chair shall have a Rearward Stability Index of 50 or more.	**High chairs and high chair accessories that have adjustment positions that are manufacturer's recommended use positions for use with children who are unable to sit upright unassisted (birth to approximately 6 months of age) or weigh 20 lb (9.1 kg) or less, when adjusted into the most onerous manufacturer's recommended use and/or adjustment position for each direction to be tested, shall not tip over and shall retain the CAMI dummy when tested in accordance with 7.7.3, in the forward, rearward, and sideways directions.**
6.5.3	*Stability with Child Climbing into Chair*—A high chair shall not tip over when tested in accordance with 7.7.3	

2. Stability Test Methods

ASTM F404-18 requires testing a high chair for stability in the forward, rearward, and sideways directions, requiring that the chair not tip over as the child occupant, up to 3 years of age, moves within the chair. Because this test was intended for upright seat high chairs designed for children up to 3 years old, the test places a total of 40-lb weights (two 20-lb weights), to simulate the weight of a 95th percentile 36-month-old, on the seat of the high chair to simulate a child in the seat, which acts as a counter-balance when horizontal forces are applied in the forward, rearward and sideways directions. The forces applied are designed to simulate the

forces that the child occupant would exert on the high chair by moving within the seat of the product.

For reclined seat high chairs, the ASTM subcommittee concluded that this stability testing developed for upright seat high chairs was inadequate, because the child's counter-balance load is different, based on the intended weight range for reclined seat products. Stability testing for upright seat high chairs uses a 40-lb counter-balance weight, because the weight range is for children weighing more than 20 lbs. This 40-lb counter-balance weight would not effectively test the stability of reclined seat high chair products that are intended for lower-weight infants from birth (~7 lb) to 20 lbs, because a 40-lb counter-balance weight would make the reclined seat high chair product more stable than a 20-lb counter-balance weight. A 20 lb counter-balance weight is a more stringent weight to test stability for high chairs intended for lower weight children. Moreover, the seat recline affects both the seat back and the seat bottom, causing the center of mass to be distributed differently than with an upright seat high chair. Weight distribution in reclined seat high chairs is more towards the seat back, whereas weight distribution in upright seat high chairs is more towards the seat bottom. Finally, due to the inclined seat design, test engineers had difficulty placing the 40 lb test weight in the seat to conduct stability testing.

Because of these design differences, ASTM developed a new testing methodology for reclined seat high chairs, in collaboration with CPSC staff. After evaluating several test methods, the task group decided that the stability testing from the bassinet standard was most appropriate to test reclined seat high chairs. Instead of using a weight to simulate a child as a counter-balance in the seat, the new stability test uses a CAMI Newborn Dummy (7.5 lb). The anthropomorphic CAMI Newborn Dummy better fits the reclined seat, and the weight is better

distributed within the high chair than with the barbell type weights used to test upright seat high chairs. Also, the test engineer can more easily locate the points on the reclined seat high chair to place the loads around the chair. Using the CAMI Newborn Dummy instead of weights resulted in more repeatable and consistent test results.

Given that reclined seat high chairs are designed for infants in a lower age/weight range (birth to 20 lbs), who have limited moving capabilities, these infants are unlikely to create instability issues by themselves. Instead, instability for reclined seat high chair products would likely come from external sources (*e.g.*, caregivers bumping into the chair and/or siblings pulling on the chair). Accordingly, for reclined seat products, the new stability test method in section 7.7.3 of ASTM F404-20 adopts stability requirements and testing from the bassinet standard, ASTM F2194-16e1, which was designed to test siblings interacting with the product. Section 7.4 of ASTM F404-20 uses the CAMI Newborn Dummy as the counter-balance weight in the reclined seat high chair to simulate external forces that may tip the product over, such as a sibling pulling down on the edge of the product. This test employs a dual application of horizontal and vertical forces to simulate application of an angled load; the combination of the weights and forces in the testing simulate the mean strength of a 2-year-old pulling on the product.

Following is a description of each new stability test method for reclined seat high chair products:

- 7.7.3.4 *Forward Stability*, requires that a 23-lb weight be hung onto the forward-most edge of the high chair seat or tray. The high chair must not tip over while this load is maintained, and then a horizontal force of 5 lb is applied outward from the center of the seat, at the same location as the 23-lb weight.

- 7.7.3.5 *Rearward Stability*, requires that a 23-lb weight be hung onto the rearmost edge of the seat. The high chair must not tip over while this load is maintained, and then a horizontal force of 5 lb is applied outward from the center of the seat, at the same location as the 23-lb weight.
- 7.7.3.6 *Sideways Stability*, requires that a 23-lb weight be hung onto the outermost point of the frame on the side being tested. The high chair must not tip over while this load is maintained and then a horizontal force of 5 lb is applied from the center of the seat, at the location as the 23-lb weight.

The Commission concludes that new stability performance and test methods for reclined seat high chairs improve the safety of high chairs, because these tests are designed to address tipover hazards associated with infant users moving within the product and external forces like a sibling or caregiver interacting with the product. Additionally, use of the 7.5-lb CAMI Newborn Dummy provides a more stringent test for the tipover hazard. The test is more stringent because a lighter weight provides less of a counter-balance in assessing external forces acting on the reclined seat high chair products than the heavier 40-lb weight used to test upright seat high chairs intended for children up to 3 years old.

3. Static Load Test Methods

a. High Chair Seat

ASTM F404-18, the current mandatory standard, requires a static load test for high chair seats. The test requires the high chair seat to support static loads without causing any hazardous conditions, such as collapsing or breaking.

ASTM F404-20 splits into two parts section 7.6.1 *Seat Static Load Test* to separate the test method intended for upright seat high chairs in section 7.6.1.1, from a new test method

intended for reclined seat high chairs in section 7.6.1.2. Separating test requirements by product type allows for static load testing requirements based on the weight of the child the seat was intended to hold. Accordingly, section 7.6.1.2 of ASTM F404-20, for reclined seat high chairs, uses half the test weight compared to section 7.6.1.1, for upright seat high chairs, to test for collapse (50 lbs applied over 60 seconds, compared to 100 lbs applied over 60 seconds in section 7.6.1.1).

The rationale for the 100-lb load for the upright seat high chair static load test is that it represents 2.5 times that of the maximum occupant's weight of 40 lbs. The test weight for reclined seat high chairs in section 7.6.1.2 follows this same rationale, using a 50-lb load weight, which is 2.5 times the maximum occupant's weight of 20 lbs. Lowering the static load test weight for products intended for lower-weight occupants provides the same level of safety for both upright and reclined seat high chairs, because the respective weights represent the maximum intended occupant weights for each product type. Accordingly, because both types of high chairs in section 7.6.1 use the same weight ratio to test the static load, this change is neutral to the safety of high chairs.

b. Step/Footrest

The current mandatory standard, ASTM F404-18, requires that a step or footrest shall support static loads without causing any hazardous conditions, such as collapsing and breaking. This step/footrest static load test is designed to test that the step/foot rest of the high chair will not collapse under the weight of the child climbing into the high chair. Section 7.6.2 *Step/Footrest Static Load Test* of ASTM F404-20 has a new section, 7.6.2.1, which exempts high chairs intended for children weighing less than 20 lbs from the step/footrest static load testing requirement, because infants who weigh less than 20 lbs would not be mobile enough to climb

into the high chair using the step/footrest. Staff states that they are unaware of any incidents involving step/footrest collapse with children who weigh less than 20 lbs, meaning children 6 months old or younger. Based on this analysis, the Commission concludes that this change is neutral to the safety of high chairs.

c. High Chair Tray

Currently, in ASTM F404-18, the intent of the tray static load test is to ensure that a high chair tray does not collapse under the weight of the child occupant if placed there temporarily while the caregiver is putting the child into the high chair. ASTM F404-20, section 7.6.3 *Tray Static Load Test*, separates the tray static load test into two parts: section 7.6.3.1 describes testing high chairs intended for children weighing more than 20 lbs (9 kg), and section 7.6.3.2 describes testing high chairs intended for children weighing 20 lbs or less. Because high chairs intended for infants who weigh 20 lbs or less would have less of a static load to cause collapse of the high chair tray, section 7.6.3.2 uses half the test weight of the tray static load test for high chairs intended for children who weight more than 20 lbs (25 lbs applied over 60 seconds, compared to 50 lbs applied over 60 seconds in section 7.6.3.1).

As with the high chair seat static load testing, ASTM F404-20 requires that both types of high chairs be tested to the same level of safety, because load testing is adjusted based on the maximum weight of the child occupant. Accordingly, this change is neutral to the safety of high chairs because differentiating the tray static load test based on the weight of the intended child occupant does not reduce the level of safety for high chair products.

4. Dynamic High Chair Test Methods

ASTM F404-18 requires that all high chairs meet a dynamic high chair test, which is intended to address the collapse of a high chair when an older child (up to 3 years old) bounces

up and down in the chair. Section 7.10.1 of ASTM F404-20 adds an exemption from this test for high chairs intended for use with children weighing 20 lbs or less. ASTM's rationale for the exemption is that lower weight users of the product will not be mobile enough to bounce significantly in the high chair, or bear enough weight to cause the high chair to collapse. Staff is unaware of incidents of high chair collapse due to lower weight children, 6 months old and younger, bouncing in the product. Accordingly, this change is neutral to the safety of high chairs, because exemption of high chairs intended for children weighing 20 lbs or less from dynamic testing is unlikely to reduce the level of safety for these products, given that these high chairs are intended for use by infants with limited mobility.

B. Non-substantive Changes

ASTM F404-20 also includes minor additions and revisions that are editorial and do not alter any substantive requirements in the standard. Because they do not change any substantive requirements, these revisions are neutral regarding the safety of high chairs.

1. Referenced documents

Section 2 of ASTM F404-20 lists other standards referenced in F404. Section 2.3 of ASTM F404-20, *ANSI standards*, was revised to include a reference to ANSI Z535.1 Safety Colors. This revision was made to be consistent with other ASTM standards that reference the ANSI standard for safety colors for use in distinguishing warning labels. Additionally, section 2.4 of ASTM F404-20, *Other references*, adds a reference to new test equipment, the CAMI Infant Dummy Mark II and the CAMI Newborn Dummy, which are used in the new stability testing for reclined seat high chair products. Staff considers these changes to be neutral to the safety of high chairs, because they are editorial in nature and do not substantively alter requirements in the standard.

2. Terminology

Section 3.1.7.2 of ASTM F404-20, *Discussion,* includes a new note stating that a product that has an elevated seat and is designed or promoted for eating and feeding, or shown near a dining table would be considered within the scope of the high chair standard. Staff considers this change to be neutral to the safety of high chairs, because it provides further discussion on the definition of "high chairs," but does not alter the definition, nor change the scope of the standard.

Other changes in Terminology include changing the term "free standing" to "free-standing," and in section 3.1.21, revising the definition of "static load," as follows:

3.1.21 *static load, n*—vertically downward ~~force~~load applied by ~~a calibrated force gauge or by dead weights.~~ weights or other means.

These changes in terminology are neutral to the safety of high chairs because they are editorial in nature and do not substantively alter the definitions.

3. Calibrations and Standardizations, General Requirements, and Performance Requirements

ASTM made a few editorial changes to the sections of ASTM F404-20 on calibrations and standardizations, general requirements, and performance requirements, to clarify provisions and to be consistent with other ASTM standards. For example, ASTM made editorial changes such as revising "0.210 in (5 mm)" to "0.210-in (5-mm)." These revisions are neutral to the safety of high chairs, because they do not substantively alter the requirements in these sections.

III. Incorporation by Reference

Section 1231.2 of the direct final rule incorporates by reference ASTM F404-20. The Office of the Federal Register (OFR) has regulations regarding incorporation by reference. 1 CFR part 51. Under these regulations, agencies must discuss, in the preamble to a final rule,

ways in which the material the agency incorporates by reference is reasonably available to interested parties, and how interested parties can obtain the material. In addition, the preamble to the final rule must summarize the material. 1 CFR 51.5(b).

In accordance with the OFR regulations, section **II. Description of ASTM F404-20** of this preamble summarizes the major provisions of ASTM F404-20 that the Commission incorporates by reference into 16 CFR part 1231. The standard is reasonably available to interested parties and interested parties can purchase a copy of ASTM F404-20 from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959 USA; phone; 610-832-9585; www.astm.org. Additionally, until the direct final rule takes effect, a read-only copy of ASTM F404-20 is available for viewing on ASTM's website at: https://www.astm.org/CPSC.htm. Once the rule takes effect, a read-only copy of the standard will be available for viewing on the ASTM website at: https://www.astm.org/READINGLIBRARY/. Interested parties can also schedule an appointment to inspect a copy of the standard at CPSC's Division of the Secretariat, U.S. Consumer Product Safety Commission, Room 820, 4330 East West Highway, Bethesda, MD 20814, telephone: 301-504-7479; email: cpsc-os@cpsc.gov.

IV. Certification

Section 14(a) of the Consumer Product Safety Act (CPSA; 15 U.S.C. 2051-2089) requires manufacturers of products subject to a consumer product safety rule under the CPSA, or to a similar rule, ban, standard, or regulation under any other act enforced by the Commission, to certify that the products comply with all applicable CPSC requirements. 15 U.S.C. 2063(a). Such certification must be based on a test of each product, or on a reasonable testing program, or, for children's products, on tests of a sufficient number of samples by a third party conformity

assessment body accredited by CPSC to test according to the applicable requirements. As noted, standards issued under section 104(b)(1)(B) of the CPSIA are "consumer product safety standards." Thus, they are subject to the testing and certification requirements of section 14 of the CPSA.

Because high chairs are children's products, a CPSC-accepted third party conformity assessment body must test samples of the products for compliance with part 1231. Products subject to part 1231 also must comply with all other applicable CPSC requirements, such as the lead content requirements in section 101 of the CPSIA,[5] the phthalates prohibitions in section 108 of the CPSIA[6] and 16 CFR part 1307, the tracking label requirements in section 14(a)(5) of the CPSA,[7] and the consumer registration form requirements in section 104(d) of the CPSIA.[8]

V. Notice of Requirements

In accordance with section 14(a)(3)(B)(iv) of the CPSIA, the Commission previously published a notice of requirements (NOR) for accreditation of third party conformity assessment bodies (third party labs) for testing high chairs, and codified the requirement at 16 CFR § 1112.15(b)(44). 83 FR at 28368-70. The NOR provided the criteria and process for CPSC to accept accreditation of third party labs for testing high chairs to 16 CFR part 1231. *Id.* The Commission codified NORs for all mandatory standards for durable infant or toddler products in "Requirements Pertaining to Third Party Conformity Assessment Bodies," 16 CFR part 1112.

ASTM F404-20 includes new stability requirements for testing reclined seat high chairs. We note that the current mandatory standard based on ASTM F404-18 already requires stability testing for high chairs intended for children up to 3 years old, such that the Commission

[5] 15 U.S.C. 1278a.
[6] 15 U.S.C. 2057c.
[7] 15 U.S.C. 2063(a)(5).
[8] 15 U.S.C. 2056a(d).

considers third party labs that are currently CPSC-accepted for 16 CFR part 1231 have demonstrated competence for the new stability testing for reclined seat high chairs in ASTM F404-20.

Additional testing requirements for reclined seat high chair products in ASTM F404-20, however, introduce test equipment previously not required in testing to ASTM F404-18, specifically, a 23-lb weight, and a CAMI Newborn Dummy. Similar stability testing, with similar weights and the CAMI Newborn Dummy, are also required in testing to the mandatory standard for bassinets and cradles, 16 CFR part 1218, based on ASTM F2194-16e1. Additionally, the CAMI Newborn Dummy is required test equipment for the mandatory standard for hand-held infant carriers, 16 CFR part 1225, based on ASTM F2050-16. Currently, 19 third party labs are CPSC-accepted to test to the Safety Standard for High Chairs, and 17 of these 19 third party labs are also CPSC-accepted to test to part 1218 and/or part 1225. Accordingly, only two of the 19 third party labs will likely have to source new test materials to test to ASTM F404-20.

Based on experience purchasing test equipment, these two third party labs, one in Singapore and one in Taiwan, should be able to purchase the necessary weights, as these weights can be as simple as gym/barbell weights or even weight bags. Additionally, staff advises that the CAMI Newborn Dummy is available from at least three sources globally. Because the effective date of the revised high chair standard is July 3, 2021, these two third party labs have sufficient time to acquire the necessary test equipment.

Third party labs will begin testing to the new standard when ASTM F404-20 goes into effect on July 3, 2021, and the existing accreditations that the Commission has accepted for testing to this standard will cover testing to the revised standard. Accordingly, the existing NOR

for the Safety Standard for High Chairs will remain in place, and CPSC-accepted third party labs are expected to update the scope of the third party lab's accreditations to reflect the revised high chair standard in the normal course of renewing their accreditations.

VI. Direct Final Rule Process

The Commission is issuing this rule as a direct final rule. Although the Administrative Procedure Act (APA; 5 U.S.C. 551-559) generally requires agencies to provide notice of a rule and an opportunity for interested parties to comment on it, section 553 of the APA provides an exception when the agency, "for good cause finds" that notice and comment are "impracticable, unnecessary, or contrary to the public interest." *Id.* 553(b)(B). The Commission concludes that when it updates a reference to an ASTM standard that the Commission incorporated by reference under section 104(b) of the CPSIA, notice and comment are not necessary.

Under the process set out in section 104(b)(4)(B) of the CPSIA, when ASTM revises a standard that the Commission has previously incorporated by reference under section 104(b)(1)(B) of the CPSIA, that revision will become the new CPSC standard, unless the Commission determines that ASTM's revision does not improve the safety of the product. Thus, unless the Commission makes such a determination, the ASTM revision becomes CPSC's standard by operation of law. The Commission is allowing ASTM F404-20 to become CPSC's new standard. The purpose of this direct final rule is to update the reference in the Code of Federal Regulations (CFR) so that it reflects the version of the standard that takes effect by statute. This rule updates the reference in the CFR, but under the terms of the CPSIA, ASTM F404-20 takes effect as the new CPSC standard for high chairs, even if the Commission does not issue this rule. Thus, public comments would not alter substantive changes to the standard or the

effect of the revised standard as a consumer product safety rule under section 104(b) of the CPSIA. Under these circumstances, notice and comment are unnecessary.

In Recommendation 95-4, the Administrative Conference of the United States (ACUS) endorses direct final rulemaking as an appropriate procedure to expedite rules that are noncontroversial and that are not expected to generate significant adverse comments. *See* 60 FR 43108 (Aug. 18, 1995). ACUS recommends that agencies use the direct final rule process when they act under the "unnecessary" prong of the good cause exemption in 5 U.S.C. 553(b)(B). Consistent with the ACUS recommendation, the Commission is publishing this rule as a direct final rule, because CPSC does not expect any significant adverse comments.

Unless CPSC receives a significant adverse comment within 30 days of this notification, the rule will become effective on July 3, 2021. In accordance with ACUS's recommendation, the Commission considers a significant adverse comment to be "one where the commenter explains why the rule would be inappropriate," including an assertion challenging "the rule's underlying premise or approach," or a claim that the rule "would be ineffective or unacceptable without change." 60 FR 43108, 43111. As noted, this rule merely updates a reference in the CFR to reflect a change that occurs by statute.

If the Commission receives a significant adverse comment, the Commission will withdraw this direct final rule. Depending on the comment and other circumstances, the Commission may then incorporate the adverse comment into a subsequent direct final rule or publish a notice of proposed rulemaking, providing an opportunity for public comment.

VII. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA; 5 U.S.C. 601-612) generally requires agencies to review proposed and final rules for their potential economic impact on small entities, including

small businesses, and prepare regulatory flexibility analyses. 5 U.S.C. 603, 604. The RFA applies to any rule that is subject to notice and comment procedures under section 553 of the APA. *Id.* As discussed in section **VI. Direct Final Rule Process** of this preamble, the Commission has determined that notice and the opportunity to comment are unnecessary for this rule. Therefore, the RFA does not apply. The Commission also notes the limited nature of this document, which merely updates the incorporation by reference to reflect the mandatory CPSC standard that takes effect under section 104 of the CPSIA.

VIII. Paperwork Reduction Act

The current mandatory standard for high chairs includes requirements for marking, labeling, and instructional literature that constitute a "collection of information," as defined in the Paperwork Reduction Act (PRA; 44 U.S.C. 3501-3521). The revised mandatory standard for high chairs does not alter these requirements. The Commission took the steps required by the PRA for information collections when it adopted 16 CFR part 1231, including obtaining approval and a control number. Because the information collection is unchanged, the revision does not affect the information collection requirements or approval related to the standard.

IX. Environmental Considerations

The Commission's regulations provide a categorical exclusion for the Commission's rules from any requirement to prepare an environmental assessment or an environmental impact statement where they "have little or no potential for affecting the human environment." 16 CFR

1021.5(c)(2). This rule falls within the categorical exclusion, so no environmental assessment or environmental impact statement is required.

X. Preemption

Section 26(a) of the CPSA provides that where a consumer product safety standard is in effect and applies to a product, no state or political subdivision of a state may either establish or continue in effect a requirement dealing with the same risk of injury unless the state requirement is identical to the Federal standard. 15 U.S.C. 2075(a). Section 26(c) of the CPSA also provides that states or political subdivisions of states may apply to CPSC for an exemption from this preemption under certain circumstances. Section 104(b) of the CPSIA deems rules issued under that provision "consumer product safety standards." Therefore, once a rule issued under section 104 of the CPSIA takes effect, it will preempt in accordance with section 26(a) of the CPSA.

XI. Effective Date

Under the procedure set forth in section 104(b)(4)(B) of the CPSIA, when a voluntary standards organization revises a standard that the Commission adopted as a mandatory standard, the revision becomes the CPSC standard within 180 days of notification to the Commission, unless the Commission determines that the revision does not improve the safety of the product, or the Commission sets a later date in the *Federal Register*. 15 U.S.C. 2056a(b)(4)(B). The Commission is taking neither of those actions with respect to the revised standard for high chairs. Therefore, ASTM F404-20 automatically will take effect as the new mandatory standard for high chairs on July 3, 2021, 180 days after the Commission received notice of the revision on January 4, 2021. As a direct final rule, unless the Commission receives a significant adverse comment within 30 days of this notice, the rule will become effective on July 3, 2021.

XII. Congressional Review Act

The Congressional Review Act (CRA; 5 U.S.C. 801-808) states that before a rule may take effect, the agency issuing the rule must submit the rule, and certain related information, to each House of Congress and the Comptroller General. 5 U.S.C. 801(a)(1). The CRA submission must indicate whether the rule is a "major rule." The CRA states that the Office of Information and Regulatory Affairs (OIRA) determines whether a rule qualifies as a "major rule."

Pursuant to the CRA, this rule does not qualify as a "major rule," as defined in 5 U.S.C. 804(2). To comply with the CRA, CPSC will submit the required information to each House of Congress and the Comptroller General.

List of Subjects in 16 CFR Part 1231

Consumer protection, Imports, Incorporation by reference, Imports, Infants and children, Law enforcement, Safety, Toys.

For the reasons discussed in the preamble, the Commission amends 16 CFR chapter II as follows:

PART 1231 – SAFETY STANDARD FOR HIGH CHAIRS

1. Revise the authority citation for part 1231 to read as follows:

Authority: Sec. 104, Pub. L. 110-314, 122 Stat. 3016 (15 U.S.C. 2056a); Sec 3, Pub. L. 112-28, 125 Stat. 273.

2. Revise § 1231.2 to read as follows:

§ 1231.2 Requirements for High Chairs.

Each high chair shall comply with all applicable provisions of ASTM F404-20, *Standard Consumer Safety Specification for High Chairs*, approved on October 1, 2020. The Director of

the Federal Register approves this incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You may obtain a copy from ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959; phone: (610) 832-9585; www.astm.org. A read-only copy of the standard is available for viewing on the ASTM website at https://www.astm.org/READINGLIBRARY/. You may inspect a copy at the Division of the Secretariat, U.S. Consumer Product Safety Commission, Room 820, 4330 East West Highway, Bethesda, MD 20814, telephone (301) 504-7479, email: cpsc-os@cpsc.gov, or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email fedreg.legal@nara.gov, or go to: www.archives.gov/federal-register/cfr/ibr-locations.html.

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Alberta E. Mills,
Secretary,
Consumer Product Safety Commission.

UNITED STATES
CONSUMER PRODUCT SAFETY COMMISSION
4330 EAST WEST HIGHWAY, BETHESDA, MD 20814

Memorandum

This document has been electronically approved and signed.

March 17, 2021

TO : The Commission
Alberta E. Mills, Secretary

THROUGH: Jennifer Sultan, Acting General Counsel
Mary T. Boyle, Executive Director
DeWane Ray, Deputy Executive Director for Safety Operations

FROM : Duane E. Boniface, Assistant Executive Director
Office of Hazard Identification and Reduction

Stefanie Marques, Ph.D., High Chairs Project Manager
Division of Physiology and Pharmacology
Directorate for Health Sciences

SUBJECT : Notice of Revision to the Safety Standard for High Chairs (16 CFR Part 1231)

I. INTRODUCTION

The Danny Keysar Child Product Safety Notification Act, section 104 of the Consumer Product Safety Improvement Act of 2008 (CPSIA), instructs voluntary standards organizations, such as ASTM International (ASTM), to notify the U.S. Consumer Product Safety Commission (CPSC) of revisions to voluntary standards that are the basis for consumer product safety standards promulgated by the Commission. Section 104(b)(4)(B) of the CPSIA states:

> *(B) COMMISSION ACTION ON REVISED VOLUNTARY STANDARD - If an organization revises a standard that has been adopted, in whole or in part, as a consumer product safety standard under this subsection, it shall notify the Commission. The revised voluntary standard shall be considered to be a consumer product safety standard issued by the Commission under section 9 of the Consumer Product Safety Act (15 U.S.C. 2058), effective 180 days after the date on which the organization notifies the Commission (or such later date specified by the Commission in the Federal Register) unless, within 90 days after receiving that notice, the Commission notifies the organization that it has determined that the proposed revision does not improve the safety of the consumer product covered by*

the standard and that the Commission is retaining the existing consumer product safety standard.

On June 19, 2018, the Commission published a final rule establishing a mandatory Safety Standard for High Chairs, codified in 16 CFR part 1231 (part 1231), incorporating by reference, without change, ASTM F404-18, *Standard Consumer Safety Specification for High Chairs*. The effective date for the final rule was June 19, 2019. On January 4, 2021, ASTM officially notified the CPSC that it published a revised standard, ASTM F404-20, to update the requirements for high chairs. This memorandum outlines the revisions made to ASTM F404 since CPSC's mandatory standard was published, and it assesses the differences between part 1231 and the revised ASTM voluntary standard, ASTM F404-20. This memorandum also discusses the new stability requirements in ASTM F404-20 for reclined seat high chair products and how they were developed by ASTM in close collaboration with CPSC staff. Based on staff's evaluation of the revised voluntary standard for high chairs, staff recommends that the Commission allow ASTM F404-20 to be considered the new consumer product safety standard for high chairs. Additionally, staff recommends that the Commission issue a direct final rule to incorporate by reference ASTM F404-20 as the mandatory standard for high chairs codified in part 1231.

II. DISCUSSION

A. Previous updates to the high chair standard: a review and comparison of ASTM F404-18a to ASTM F404-18

On April 3, 2019, ASTM officially notified CPSC that it had published a revised standard, ASTM 404-18a. ASTM F404-18a added a new subsection 6.5.1, which exempted a subset of high chair products from sections 6.5.2. *Forward and Sideways Stability*, 6.5.3. *Rearward stability*, and 6.5.4 *Stability with Child Climbing into Chair*. Staff's 2018 final rule briefing package referred to this subset of high chairs as "reclined seat high chair products."

CPSC staff assessed ASTM 404-18a and concluded that the addition of subsection 6.5.1 was a substantive change to the current mandatory standard, ASTM F404-18, that did not improve the safety of high chairs. The existing stability requirements for the high chair standard, which address stability as the child occupant moves within and about the chair, were developed because high chairs are intended for use by mobile children, up to 3 years of age. The rationale in ASTM F404-18a for exempting reclined seat high chair products from these essential stability requirements was that the intended infant user (birth to approximately 6 months of age) would not be as mobile within and around the high chair to present a tip-over hazard. However, CPSC staff was concerned that exempting high chairs and high chair accessories intended for children who are unable to sit upright unassisted (birth to approximately 6 months of age) from essential stability requirements is not consistent with other product standards that are intended for the

same age group. For example, products like bouncers, bassinets, and cradles are also intended for young infants and also have stability requirements to prevent tip-over incidents. The tip-over requirements in the bouncers and bassinets standards are intended to address tip-over incidents caused by the infant user moving within the product and external forces, such as sibling or caregiver interactions with the product. In addition, a review of high chair incident data showed that tip-over incidents resulting from occupant movement within the high chair or from external forces, such as a sibling or caregiver acting on the high chair, do occur with children 6 months and younger.

In a June 2019 staff briefing package, CPSC staff recommended that the Commission not adopt the revised voluntary standard and maintain the mandatory standard based on ASTM F404-18because F404-18a exempted products used by a vulnerable group (children from birth to approximately 6 months of age) from essential performance requirements for stability in F404-18.[1] The Commission voted unanimously *not* to adopt F401-18a as the new CPSC mandatory standard for high chairs. Staff notified ASTM on June 19, 2019 of the Commission's decision to retain ASTM F404-18.

B. Current update to the high chair standard: a review and comparison of ASTM F404-20 to ASTM F404-18a and ASTM F404-18

Substantive changes

1. Performance requirements

As described below in section 2, CPSC staff worked closely with ASTM to help develop new stability testing requirements for reclined seat high chair products. In November 2018, CPSC staff tested six reclined-seat high chair products to stability requirements proposed by the manufacturer, who originally expressed concerns about the testing of these products, such as the reclined seat presenting a challenge to correctly place test weights in the seat, and determine the height from the seat base necessary to apply the forces during stability testing, In March 2019, CPSC staff hosted a reclined-seat high chair task group meeting, where staff demonstrated our testing on reclined-seat high chair products. The task group discussion that followed was very productive, and the task group decided that it would explore the idea of using the stability test from the bassinet and cradle standard, which is based on siblings interacting with the product, to develop stability requirements for the reclined-seat high chair products. This stability test seemed to be the most appropriate for testing the tip-over hazard for reclined-seat high chairs that was most concerning to both ASTM and CPSC staff: the interaction of a sibling or caregiver pulling on the reclined seat product. This testing idea was presented by the reclined seat task group at the

[1] https://www.cpsc.gov/s3fs-public/Update%20to%20Voluntary%20Standard%20for%20High%20Chairs.pdf?5nvjyCgQrNh.pQhwmCtd85aQJjc2mohX

ASTM subcommittee teleconference on April 4, 2019, and it was ultimately the basis of the new stability requirements for reclined seat products in ASTM F404-20.

Substantively, ASTM F404-20 improves the safety of high chairs because it removes the exemption from the stability requirements for reclined-seat high chair products and adds new stability requirements for these reclined-seat high chair products. These new stability requirements for reclined-seat high chair products are also a substantive improvement over F404-18, the current CPSC standard for high chairs. The table below describes the differences among ASTM-F404-18, ASTM F404-18a, and ASTM F404-20 for section 6.5 *Stability* (changes are highlighted in bold):

Section	F404-18	F404-18a	F404-20
6.5	*Stability*	*Stability*	*Stability*
6.5.1	*Forward and Sideways Stability*—A high chair shall not tip over when setup as defined in 7.7.2.1 – 7.7.2.3, and then when forces are applied in accordance with 7.7.2.4 and 7.7.2.5.	**High chairs and high chair accessories that, per the manufacturer's instructions, can be used only with children who are unable to sit upright unassisted (birth to approximately 6 months of age) and weigh 20 lbs. (9.1 kg) or less are exempt from the requirements in this section**	**High chairs and high chair accessories that have adjustment positions that, per the manufacturer's instructions, are recommended for use only for children able to sit upright unassisted (approximately 6 months of age) or weighing more than 20 lbs. (9.1 kg) shall comply with 6.5.1.1 to 6.5.1.3. in all those manufacturer's recommended use and adjustment positions.**
6.5.1.1			*Forward and Sideways Stability*—A high chair shall not tip over when setup as defined in 7.7.2.1 – 7.7.2.3, and then when forces are applied in accordance with 7.7.2.4 and 7.7.2.5.

6.5.1.2.			*Rearward Stability*— When setup as defined in 7.7.2.1– 7.7.2.3, and then tested in accordance with 7.7.2.6, the high chair shall have a Rearward Stability Index of 50 or more.
6.5.1.3			*Stability with Child Climbing into Chair*—A high chair shall not tip over when tested in accordance with 7.7.4
6.5.2	*Rearward Stability*— When setup as defined in 7.7.2.1– 7.7.2.3, and then tested in accordance with 7.7.2.6, the high chair shall have a Rearward Stability Index of 50 or more.	*Forward and Sideways Stability*—A high chair shall not tip over when setup as defined in 7.7.2.1 – 7.7.2.3, and then when forces are applied in accordance with 7.7.2.4 and 7.7.2.5.	**High chairs and high chair accessories that have adjustment positions that are manufacturer's recommended use positions for use with children who are unable to sit upright unassisted (birth to approximately 6 months of age) or weigh 20 lbs. (9.1 kg) or less, when adjusted into the most onerous manufacturer's recommended use and/or adjustment position for each direction to be tested, shall not tip over and shall retain the CAMI dummy when tested in accordance with 7.7.3, in the forward, rearward, and sideways directions.**

6.5.3	*Stability with Child Climbing into Chair*—A high chair shall not tip over when tested in accordance with 7.7.3	*Rearward Stability*—When setup as defined in 7.7.2.1– 7.7.2.3, and then tested in accordance with 7.7.2.6, the high chair shall have a Rearward Stability Index of 50 or more.	
6.5.4		*Stability with Child Climbing into Chair*—A high chair shall not tip over when tested in accordance with 7.7.3	

2. Stability Test Methods

The ASTM subcommittee designed the testing in ASTM F404-18 to test that a high chair was stable in the forward, rearward, and sideways direction, and that the chair would not tip over as the child occupant up to 3 years of age moves within the chair. Because the test is designed for children up to 3 years old, the test places a total of 40-lbs. weights (two 20-lb. weights) on the seat of the high chair to simulate a child in the seat, which acts as a counter balance when horizontal forces are applied in the forward, rearward, and sideways directions. The forces applied are designed to simulate the forces that the child occupant would exert on the high chair by moving within the seat of the product.

However, for reclined-seat high chairs, the subcommittee believed this stability testing was not adequate for several reasons. First, because the weight range for reclined seat products are birth (~7lb) to 20 lbs., instead of 40 lbs., the child's counter-balance load is different. In addition, because the seat is reclined, affecting both the seat back and seat bottom, the center of mass is distributed differently than with the normal flat-seated high chair. In reclined-seat high chairs, the weight is more towards the seat back; in normal high chairs, the weight is more towards the seat bottom. Also, due to the inclined seat design, test engineers had difficulty placing the test weight in the seat to conduct the test.

Therefore, ASTM developed a new testing methodology in collaboration with CPSC staff. After evaluating several methods (*e.g*., bouncers, bassinet), the task group decided that the stability testing from the bassinet standard was most appropriate. Instead of using weight to simulate a child as a counter balance in the seat, the test uses a CAMI Newborn Dummy (7.5 lbs.). The anthropomorphic CAMI Newborn Dummy fits the seat better, and the weight is distributed better within the chair than with barbell-type weights. Also, the test engineer can locate more

easily the points on the chair to place the loads around the chair. Using the mannequin instead of weights resulted in more repeatable and consistent test results.

Given that children in this age/weight range (birth to 20 lbs.) have very limited moving capabilities, they are very unlikely to create instability issues by themselves. Staff and ASTM agreed that instability on these new products would likely come from external sources (*e.g.,* caregivers bumping into the chair and/or siblings pulling on the chair). For this reason, ASTM adopted stability requirements and testing from the bassinet standard (which is based on siblings interacting with the product,). The new stability test method section in ASTM F404-20, 7.7.3, *Stability with Child in Chair*, for use with children unable to sit upright unassisted weighing 20 lbs. (9.1 kg) or less, is based on the stability test methods in the current bassinet standard ASTM F2194-16e1, Section 7.4, which uses the CAMI Newborn Dummy as the counter-balance weight in the product. To simulate attempting to tip the product over, such as a sibling pulling down on the edge of the product, the test employs a dual application of horizontal and vertical forces to simulate application of an angled load. The only major difference between the testing in the basinet standard and the new high chair standard is that the structures from which the 23-lb. weight are hung are more relevant to high chairs versus bassinets, *e.g.*, trays.

Section 7.7.3.4 *Forward Stability*, requires a 23-lb. weight to be hung onto the forward-most edge of the high chair seat or tray. The high chair must not tip over while this load is maintained, and then a horizontal force of 5 lb. is applied outward from the center of the seat, at the same location as the 23-lb. weight.

Section 7.7.3.5 *Rearward Stability*, requires a 23-lb. weight to be hung onto the rearmost edge of the seat. The high chair must not tip over while this load is maintained, and then a horizontal force of 5 lb. is applied outward from the center of the seat, at the same location as the 23-lb. weight.

Section 7.7.3.6 *Sideways Stability*, requires a 23-lb. weight to be hung onto the outermost point of the frame on the side being tested. The high chair must not tip over while this load is maintained, and then a horizontal force of 5 lb. is applied from the center of the seat, at the same location as the 23-lb. weight.

Staff concludes that new stability testing for reclined high chairs improves the safety of high chairs because it is designed to test for tip-over hazards that have been determined by incident data, such as the infant user moving within the product, and the external forces, like a sibling or caregiver acting on the product. Additionally, staff concludes that the use of the 7.5-lb. CAMI Newborn Dummy is a more stringent and appropriate weight to counter balance external forces acting on the reclined-seat high chair products than the heavier 40-lb. weight used for test high chairs intended for children up to 3 years old.

3. Collapse (Static and Dynamic load) Test Methods

ASTM F404-18, the current mandatory standard, requires a static load test for high chair seats. The test requires the high chair seat to support static loads without causing any hazardous conditions, such as collapsing or breaking. In ASTM F404-20, ASTM split into two parts Section 7.6.1 *Seat Static Load Test* to describe testing high chairs that include use for children weighing more than 20 lb. (9 kg) in Section 7.6.1.1, and in Section 7.6.1.2 to describe testing high chairs intended for children weighing less than 20 lb., who are not able to sit upright unassisted. ASTM's purpose in dividing this section was to provide different static load testing requirements based on the weight of the child the seat was intended to hold, because this test is designed to test that the high chair seat does not collapse under the weight of the child occupant. Because high chairs that are intended for infants who weigh less than 20 lbs. would have less of a static load (child weight) in the high chair seat, Section 7.6.1.2 uses half the weight to test for collapse (50 lbs. applied over 60 seconds, compared to 100 lbs. applied over 60 seconds in section 7.6.1.1). The static load test in section 7.6.1.1 is 100 lbs., which is 2.5 times that of the maximum occupant's weight of 40 lbs. The test weight in section 7.6.1.2 for infants less than 20 lbs. follows this same rationale, using a 50-lb. weight, which is 2.5 times the maximum occupant's weight of 20 lbs. Staff concludes that lowering the static load test weight should provide the same level of safety. Accordingly, because both types of high chairs in section 7.6.1 use the same weight ratio to test the static load, staff considers this change to be neutral to the safety of high chairs.

The current mandatory standard, ASTM F404-18, requires that a step or footrest shall support static loads without causing any hazardous conditions, such as collapsing and breaking. Section 7.6.2 *Step/Footrest Static Load Test* of ASTM F404-20 has a new Section 7.6.2.1, which exempts high chairs intended for children weighing less than 20 lbs., who are not able to sit upright unassisted, from the step/footrest static load testing requirement. The step/footrest static load test is designed to test that the step/foot rest of the high chair would not collapse under the weight of the child climbing into the high chair. Because infants who weigh less than 20 lbs. and are unable to sit upright unassisted would not be mobile enough to climb into the high chair using the step/footrest, ASTM concluded that this testing requirement is not appropriate for these products. Staff agrees and considers this change to be neutral to the safety of high chairs, because exemption of this testing method is appropriate for high chairs intended for the infant user who has lower weight and limited mobility; this is supported by the fact that there are no incidents of step/footrest collapse involving children 6 months old or younger.

Currently, in ASTM F404-18, the tray static load test requires that a high chair tray not collapse under the weight of the child occupant if placed there temporarily while the caregiver places the child into the high chair. In ASTM F404-20, Section 7.6.3 *Tray Static Load Test* was split into two parts: Section 7.6.3.1, to describe testing high chairs that include use for children weighing more than 20 lbs. (9 kg) and Section 7.6.3.2, to describe testing high chairs intended for children

weighing less than 20 lbs., who are not able to sit upright unassisted. Because high chairs that are intended for infants who weigh less than 20 lbs. would have less of a static load to cause collapse of the high chair tray, Section 7.6.3.2 uses half the weight (25 lbs. applied over 60 seconds, compared to 50 lbs. applied over 60 seconds in section 7.6.3.1). As with static load testing, both types of high chairs are testing to the same level of safety, because the load tested is adjusted based on the maximum weight of the child occupant. Accordingly, staff considers this change to be neutral to the safety of high chairs, because it provides an equivalent method for testing high chairs intended for lower-weight infant occupants.

ASTM F404-18 requires that all high chairs meet a dynamic high chair test, which is intended to address a slow collapse of a high chair when an older child (up to 3 years old) bounces up and down in the chair. ASTM F404-20 adds an exemption in section 7.10.1 for the dynamic high chair test, for high chairs intended for use only with children weighing less than 20 lbs., who are not able to sit upright unassisted. ASTM's rationale for the exemption is that lower-weight users of the product will not be mobile enough to bounce significantly in the high chair, or bear enough weight to cause the high chair to collapse slowly. Staff agrees with ASTM's rationale and found no incidents of high chair collapse due to lower weight children, 6 months old and younger, bouncing in the product. Accordingly, staff considers this change to be neutral to the safety of high chairs, because exemption of this testing method is appropriate for high chairs intended for the infant user who has a lower weight and limited mobility.

Non-substantive changes

1.Referenced documents

In section 2.3 of ASTM F404-20, *ANSI standards*, ASTM added ANSI Z535.1 Safety Colors, for consistency with other ASTM standards that reference the ANSI standard for safety colors for use in distinguishing warning labels. In section 2.4 of ASTM F404-20, *Other references,* ASTM added the CAMI Infant Dummy Mark II and the CAMI Newborn Dummy for use in the new stability testing for reclined-seat high chair products. Staff considers these changes neutral to the safety of high chairs because they are editorial in nature and do not alter the substance of the sections using the references.

2. Terminology

Section 3.1.7.2 of ASTM F404-20, *Discussion,* includes a new note stating that a product that has an elevated seat and is designed or promoted for eating and feeding, or shown near a dining table, would be considered within the scope of the high chair standard. Staff considers this change to be neutral to the safety of high chairs because it provides further discussion on the definition of high chairs, but does not alter the definition, nor change the scope of the standard.

Other changes in Terminology include ASTM changing the term "free standing" to "free-standing," and in section 3.1.21, revising the definition of "static load," as follows:

> 3.1.21 *static load, n*—vertically downward ~~force~~load applied by ~~a calibrated force gauge or by dead weights.~~ weights or other means.

Staff considers these changes in terminology to be neutral to the safety of high chairs because the changes are editorial in nature and do not alter the substance of the definitions.

3. Calibrations and Standardizations, General Requirements and Performance requirements

ASTM made a few editorial changes to the sections of ASTM F404-20 on calibrations and standardizations, general requirements, and performance requirements, to clarify provisions and to be consistent with other ASTM standards. For example, ASTM changed "0.210 in (5 mm)" to "0.210-in (5-mm)." Staff reviewed these revisions and considers them to be neutral to the safety of high chairs because they do not alter the substance of the requirements in these sections.

C. Effect of the changes on third party testing

The notice of requirements (NOR), as set out in the final rule for high chairs, provides the criteria and process for the Commission's acceptance of accreditation of third-party conformity assessment bodies (testing laboratories) for testing high chairs to 16 CFR part 1231 (which incorporated ASTM F404-18). The NORs for children's product safety rules are listed in the Commission's rule, *"Requirements Pertaining to Third Party Conformity Assessment Bodies,"* at 16 CFR part 1112.

Although the revised voluntary standard includes new stability testing, the current mandatory standard based on ASTM F404-18 already requires stability testing. Accordingly, CPSC staff concludes that testing laboratories that are currently CPSC-accepted for 16 CFR part 1231 have demonstrated competence for the new stability testing to ASTM F404-20.

The addition of the reclined-seat high chair product testing in ASTM F404-20, however, introduces new test equipment previously not required in testing to ASTM F404-18, specifically a 23-lb. weight and a CAMI Newborn Dummy. Staff notes that similar stability testing, with similar weights and the CAMI Newborn Dummy, are also required in testing to the mandatory rule for bassinets and cradles based on ASTM F2194-16e1. Additionally, the CAMI Newborn Dummy is required test equipment for the mandatory standard for Hand-Held Infant Carriers, based on ASTM F2050-16. Staff reviewed the overlap between CPSC-accepted laboratories for high chairs and those for bassinets and cradles, and/or the hand-held carrier standard, to determine whether testing laboratories already have the necessary equipment to test to ASTM

F404-20. Currently, CPSC has accepted the accreditation of 19 laboratories to test to the Safety Standard for High Chairs; 17 out of these 19 test laboratories are also accredited for testing bassinets and cradles or hand-held infant carriers. Accordingly, two laboratories will likely have to source the appropriate test materials for ASTM F404-20. Based on staff's experience purchasing test equipment, these two laboratories, one in Singapore, and one in Taiwan, should be able to purchase the necessary weights, as these weights can be as simple as gym/barbell weights, or even weight bags. Staff also found that the CAMI Newborn Dummy is also available from at least three sources globally. If the Commission sets the effective date on July 3, 2021, as recommended by staff, these two testing laboratories have sufficient time to acquire the necessary test equipment.

For these reasons, staff recommends that the Commission consider the existing laboratory accreditations that CPSC has accepted for 16 CFR part 1231 as sufficient to test to the revised high chair standard. If the Commission follows this recommendation, the existing NOR for 16 CFR part 1231 would remain in place, and CPSC-accepted third party conformity assessment bodies would be expected to update the scope of the testing laboratories' accreditation(s) to reflect the revised standard in the normal course of renewing their accreditation(s). If the Commission approves the draft direct final rule, CPSC staff will notify all CPSC-accepted laboratories by e-mail and will provide links to the *Federal Register* notice to explain the changes to the standard and the effective date.

D. Effective date

Section 104(b)(4) of the CPSIA provides that the revised standard will become effective 180 days after the date on which an organization notifies the Commission of the revision, unless the Commission notifies the organization that it has determined that the proposed revision does not improve the safety of the consumer product covered by the standard, or the Commission specifies a later date. Therefore, if the Commission does not reject the revised standard, ASTM F404-20 would be considered the new mandatory standard for high chairs effective on July 3, 2021, unless the Commission specifies a later date. Staff is currently unaware of any reason to extend the effective date beyond 180 days. JPMA typically allows 6 months for products in their certification program to shift to a new voluntary standard once that new voluntary standard is published. Therefore, juvenile product manufacturers are accustomed to adjusting to new voluntary standards within this time frame.

III. RECOMMENDATIONS

Based on staff's analysis of ASTM F404-20, staff concludes that the revised standard improves the safety of high chair products because it includes requirements for reclined-seat high chairs, developed in collaboration with CPSC staff, which are appropriate to test potential hazard and use patterns for these products. Additionally, staff concludes that other revisions in ASTM F404-20 are safety neutral. Staff recommends that the Commission allow ASTM F04-20 to become the mandatory consumer product safety standard for high chairs. Staff also recommends that the Commission issue a direct final rule to revise the incorporation by reference in 16 CFR part 1231 to reflect the updated standard. Under section 104(b)(4)(B) of the CPSIA, unless the Commission notifies an organization that it has determined that a proposed revision does not improve the safety of a consumer product covered by the standard, and that the Commission is retaining the existing standard, the revised standard will become effective 180 days after the date on which an organization notifies the Commission of the revision. Staff recommends allowing ASTM F404-20 to become the new mandatory standard for high chairs effective July 3, 2021.