

<div> <div>PROTOCOL # 332-H</div> <div>Direct Plug-In Air Freshener or Wax Warmer</div> </div>				
Performance Test	Test Method	Samples	Requirement	Rating (Section or exec. summary which failed items can be referenced)
LABELING				
Labeling / Packaging Review	FPLA 16 CFR 500 & 19 CFR 134	All Samples	Shall be legibly marked with the following information: <ul style="list-style-type: none"> Distributor's name, trademark or other means of identification of the manufacturer or packer & address (City, State & Zip); Product identification; Net quantity of the contents in terms of weight, measure or numerical count (Metric & US Standard) or a combination so as to give accurate information and facilitate value comparison by the consumer; and Country of origin (if imported) 	
Verify Label Claims	Visual Check/ Performance Claims	All Samples	The labeling must be valid and comply with all claims.	Claim: Actual:
PHYSICAL CHARACTERISTICS				
Dimensions	FPLA/ UPLR	3 Samples	As claimed/ measured (+3% / -0%) Record actual data if there is no claim.	Claim: Actual:
Capacity (fl. oz. / ml) (If Applicable)	FPLA/ UPLR	3 Samples	Max. +5% / -0% of claimed capacity. Record actual data if there is no claim.	Claim: Actual:
PRODUCT MARKING AND INSTRUCTION				
FCC Labeling, if applicable	FCC	All Samples	Must be listed if product is a digital device with power consumption > 6nW; and with clock frequency greater than 9 kHz for AC operated item (or greater than 1.705 MHz for battery operated item)	
Regulatory Listing Mark	Visual Check	All Samples	Shall have valid NRTL's Listing mark , e.g. UL , ETL or equivalent.	
Product Markings	UL 283, 71 & 72	All Samples	The following markings shall be legible and readily visible on the product: <ul style="list-style-type: none"> Manufacturer's name or trademark Model number, type reference, etc. Date code Electrical rating Warning & cautionary marking 	
Instruction Manual	Document Review	All Samples	Shall provide written instructions regarding use, safety and maintenance.	
Important Safety Instructions	UL 283, 73	All Samples	Shall be included. Shall be separated from other instructions and shall appear before the operating instructions.	
Accessories	Document Review	All Samples	All accessories shall be included as described in the user's manual and provided with instructions for proper use.	
Durability of Marking	Kohl's TM 50	1	Rub marking gently by hand with a damp cloth for 15 seconds, followed by a cloth wetted slightly with petroleum spirit for another 15 seconds. Marking shall remain legible.	
CONSTRUCTION / WORKMANSHIP				
Frame and Enclosure	Actual Use / Visual Check	1 Sample	Shall be formed and assembled so that it has the strength, stability and rigidity required to resist the abuses to which it is subjected without introducing a risk of fire, electric shock, or injury to persons	
Assembly	UL 283 Cl. 8	1 Sample	All mechanical and electrical parts of the appliance shall be mounted securely and prevented from turning. The carafe shall be completely assembled before shipping and not require any assembly by the user.	
Riveted Connections	Visual Check	1 Sample	Rivet head shall be full, no burrs or flash.	
Welded Connections	Std. Measure/ Visual Check	1 Sample	Welding shall be good. Connection shall withstand 15lbs. pulling force for 1 minute.	
Thread Connection	Std. Measure/ Visual Check	1 Sample	Threaded connection shall be good. Screws shall withstand a torque of 0.5Nm for 1 minute. Connection shall also withstand 15lbs pulling test for 1 minute.	
Solder Connection and Quick Connection	Std. Measure/ Visual Check	1 Sample	Soldered lead wires or wire nut shall withstand 5 lbs pulling test for 1 minute.	
Unit Stability	Visual Check	1 Sample	The appliance shall not exhibit any tilting or rocking when set upon a flat surface.	
*Critical component checking	Document Review / Visual Check	1 Sample	Check the critical components in the sample with reference to those listed in the CDF/CDR of listing report.	

ELECTRICAL PROPERTIES				
Voltage Operating Range	Actual Use	1 Sample	The unit shall function properly at 0.9 to 1.06 times rated voltage input.	
Resistance of Grounding Test	UL 283 Cl. 45	1 Sample	Earthing resistance shall be 0.1 Ohm or less.	
Power Input	UL 283 Cl. 39	1 Sample	The current or wattage input to an appliance shall not be more than 105% of the rated value for a heating appliance, 110% for motor and/or combination motor/heater appliances, or the wattage input for an appliance rated 50 watts or less shall not be more than 10 watts above the rated value when the appliance is operated under the condition of maximum normal load as applicable, and when connected to a supply circuit of maximum rated voltage and rated frequency.	
Dielectric Strength	UL 283 Cl. 41	1 Sample	Shall be no breakdown of insulation.	
Leakage Current Test After Humidity Treatment	UL 283 Cl. 36	1 Sample	Shall be 0.5mA or less.	
PERFORMANCE				
Normal Operation	Actual Use	1 Sample	The appliance shall function as intended after 5 cycles of intended operation.	
On/Off Switch	Actual Use	1 Sample	On/Off switch shall withstand 200 cycles of activation.	
Melting Time of Carrier Medium (If Applicable)	Actual Use / Standard Measurement	1 Sample	Report time of complete melting of carrier medium (e.g., wax) with maximum quantity in according to instruction for use.	
Maximum Temperature of Liquid (If Applicable)	UL 283 Cl. 34.6	1 Sample	The temperature of liquid shall not exceed 65°C (75°C for wax base medium and capacity of liquid container < 5 fluid ounces / 148 ml) under normal condition. If the liquid temperature is exceeding the limit a locking-type lid is required to keep the liquid from spilling.	
Dry Operation Test	Actual Use	1 Sample	The unit supplied at maximum rated supply voltage without filling in medium and operated for 8 hours. There shall be no risk of fire or deformation of enclosure causing electric shock hazard.	
Resistance to Sagging (For wax warmers that directly mount to electrical outlet)	Standard Measurement	1 Sample	For wax warmers that plug in mount directly to the electrical outlet, the unit should be designed in such a manner to prevent sagging of the warmer unit while inserted on wall socket. While fully inserted into electrical wall outlet, apply 2X intended wax weight load to the wax reservoir. Loaded and unloaded shall not sag more than 2°.	
Cord and Plug	UL 283 Cls. 11.1.1	1 Sample	A cord-connected appliance shall be provided with a length of attached flexible cord and an attachment plug for connection to the supply circuit in accordance with Table 11.1 of this standard.	
Strain-Relief Test	UL 283, Cls. 47	1 Sample	For flexible cord: Withstands a 155.68N (35lbs) pull force applied to cord for 1 min, the conductors should not disconnect. For a through-cord switch: Withstand for 1 min a direct pull of 133.44N (30lbs), the conductor should not detached from terminal and an uninsulated conductor of cord should not be exposed.	
Actual Use	Actual Use	1 Sample	The actual burner gets dry with nothing in it for 8 hours: xx F When the wax actually starts to melt: xx F	
ANALYTICAL				
*Lead In Scrapable Surface Coating	CPSC-CH- E1003-09.1 ASTM E1613/E1645	1 Sample	≤90 ppm (0.0090% by weight).	
Lead in PVC Power Cord (Test only if No Prop 65 Warning On Package OR Product)	EPA SW 846 Method #3050 B/3051A/3052 (Mod.)	1 Sample	≤ 200 ppm (0.020% by weight) Otherwise Prop 65 warning Then the cal. Prop. 65 warning should be present. ⚠️ WARNING: This product can expose you to chemicals including Lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov SFSC Case No. CGC-07-463538	
* CA Prop 65	Refer to Protocol 1300	All Samples	All shall be reviewed against the requirements of California Proposition 65 to determine if additional testing or labeling is required.	

*General purpose lights	IEC 62321:2008 & IEC62321-7-1:2015	All Samples	California Assembly Bill 1109 General purpose lights shall not contain levels of hazardous substances prohibited by the European Union pursuant to the RoHS Directive. Maximum concentration values per homogenous material: ≤ 0.1% (lead) ≤ 0.01% (cadmium) ≤ 0.1% (mercury) ≤ 0.1% (chromium (VI)) ≤ 0.1% (PBBs) ≤ 0.1% (PBDEs) In lieu of testing, test report can be submitted if dated within two years.	
Refer to protocol Hardlines Regulatory Supplement for additional State & Federal Regulations	Refer to Protocol 1800	All Samples	All samples shall be reviewed against the requirements of the Hardlines Regulatory Supplemental Protocol (State Regulation Only) to determine if additional testing or labeling is required	
TSCA section 6(h)	In house method		<ul style="list-style-type: none"> • Deca-BDE≤0.1% • PIP (3:1)≤0.1% • 2,4,6-TTBP January 6, 2026 – Distribution into commerce of TTBP or TTBP in containers with a volume less than 35 gallons. Limit - ≤ 0.3% by weight in any container with a volume of less than 35 gallons January 6, 2026 –processing and distribution in commerce of 2,4,6-TTBP oil and lubricant additives Limit - ≤ 0.3% by weight <ul style="list-style-type: none"> • HCBd: prohibited • PCTP: ≤ 1% 	
Protocol Version	Description of Change			Approved by/Date
332-A	Initial Release			Teana Robinette 8 Oct., 2013
332-B	Updated lead content pricing			Jeetendra Shelatkar Aug 4, 2014
332-C	Renamed all in-house methods			Elaine Smaczniak October 30, 2014
332-D	Updated with critical components checking			Teana Robinette January 7, 2016
332-E	Add cord and plug, strain-relief, and actual use test			Teana Robinette Sept, 22, 2016
332-F	Updated Prop 65 Warning – Verbiage			Elizabeth Armstrong June 26, 2018
332-G	Updated product marking, important safety instructions, assembly, resistance of grounding test, power input, dielectric strength, leakage current test under humidity treatment, on/off switch, strain relief test.			Charlene Swanson November 2020
332-H	Added 1800 Hardlines Regulatory Supplement for additional State & Federal Regulations.			Kate Anderson September 2025