



VIA EMAIL

July 31, 2023

Shenzhen UV Guard Technology Co., Ltd
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Re: FDA Reference Number: COR23000060

Shenzhen UV Guard Technology Co., Ltd:

This letter notifies you that the United States (US) Food and Drug Administration (FDA), Center for Devices and Radiological Health (CDRH) has determined that your electronic product, the 59S[®] Wand Disinfectant, model no. 5F1025917 (hereafter “Wand Disinfectant”, or “your product”), an Ultraviolet C (“UVC”) product, that has a defect under 21 CFR 1003.2(b)(2). This defect was identified on March 03, 2023, through a laboratory evaluation of a sample Wand Disinfectant.

Our determination that your product has a defect, which relates to the safety of use by reason of the emission of electronic product radiation, is based on the following:

1. The Wand Disinfectant is an electronic product whose primary purpose is as a handheld product intended to emit UV radiation for sanitization purposes. The Wand Disinfectant is intended to be held in the hand for the duration of the sanitization process, causing the user to be in close proximity to the source of the radiation for the entirety of the sanitization process. Through laboratory evaluation of the UV radiation emissions from your product, FDA measured the effective (actinic) weighted spectral irradiance in the 200 to 400 nm range as 3.4 W/m² (i.e., 0.34 mW/cm²) at 5 cm from your product. The level of UV radiation emitted by your product presents a risk of injury to the user and nearby persons. The International Commission on Non-ionizing Radiation Protection recommends an exposure limit of 3.0 mJ/cm² effective spectrally weighted in the UV range, within an 8-hour period.¹ A person in the vicinity of the Wand Disinfectant, which would include a user, may receive an injury to their skin (e.g., erythema) and/or eyes (e.g., photokeratitis) from the Wand Disinfectant, in as little as 8.82 seconds (i.e., 3.0 mJ/cm² / 0.34 mW/cm²) at a distance of 5 cm from the light source. In addition, our laboratory evaluation found that the sample Wand Disinfectant exceeded 1000 seconds actinic ultraviolet hazard (Es) Exposure Limit for Risk Group 2 according to subclause 6.1.3 of the Standard IEC 62471:2006 in 42 seconds (0.7 minutes) at a distance of

¹ International Commission on Non-ionizing Radiation Protection: Guidelines on Limits of Exposure to Ultraviolet Radiation of Wavelengths between 180 nm and 400 nm (Incoherent Optical Radiation). Health Physics 87(2):171-186, 2004.

20 cm from your product. Therefore, your product was classified as a Risk Group 3 product (High Risk). As a result of its design, production or assembly, the Wand Disinfector causes the user to be in close proximity to a radiation source without shielding and high level of UV radiation, and potentially exposes other persons in the vicinity to emitted radiation, and lacks features to mitigate such exposures, creating a risk of injury. These radiation emissions affecting the user and nearby persons are unnecessary to the accomplishment of the product's primary purpose of sanitizing objects and surfaces, and create a risk of injury to persons.

2. According to the Wand Disinfector's operating instructions, its labeling, and our laboratory evaluation, the Wand Disinfector has a built-in safety feature that the UVC light will only be on when facing downwards. Per the labeling, the Wand Disinfector is intended to be held in the hand for the duration of the sanitization process. As a result of its design, production or assembly, the Wand Disinfector causes the user to be in close proximity to a radiation source without shielding and high level of UV radiation, and potentially exposes other persons in the vicinity to emitted radiation creating a risk of injury to the skin and/or eyes of the user or nearby persons. This is true even if the Wand Disinfector operation while being held in the hand is limited to when the wand is facing downwards. As discussed in item #1 above, the internationally accepted exposure limit is based on cumulative exposure over a period of 8 hours. Therefore, this safety feature does not eliminate the Wand Disinfector's emission of electronic product radiation unnecessary to the accomplishment of its primary purpose, which creates a risk of injury to the user and anyone nearby.

Due to the safety hazards presented by the Wand Disinfector, and the lack of corresponding safety features, FDA has concluded, pursuant to 21 CFR 1003.2(b)(2), that the Wand Disinfector has a defect that relates to the safety of use by reason of the emission of electronic product radiation. Specifically, your product utilizes electronic product radiation to accomplish its primary purpose, and also emits such radiation unnecessary to accomplish its primary purpose, which creates a risk of injury to any person. FDA is thus providing notice under 21 CFR 1003.11(a) of FDA's determination that your product has a defect.

Because your product has a defect as defined under 21 CFR 1003.2, you are required, under 21 CFR 1003.11(b), to immediately provide a written response to FDA with the total number of referenced products that have been produced and the number of such products that have left the place of manufacture. In addition, if product distribution was confined to specific geographical areas of the United States, please specify those areas. You have 15 days after you receive this letter to respond in writing using one of the options listed below:

- I. Refutation. Under 21 CFR 1003.11(a)(3), you may submit your views and evidence to establish that the alleged defect noted in this letter does not exist or does not relate to safety of use of the product by reason of the emission of electronic product radiation.
- II. Exemption Request. Under 21 CFR 1003.30(a), you may apply for an exemption from purchaser/subsequent transferee and dealer/distributor notification requirements in 21 CFR 1003.10(b). If exempted from such notification, you are not required to provide a repair, replacement, or refund for the defective products (under 21 CFR 1004.1(a)). Your request must

include the grounds upon which such exemption is requested (see 21 CFR 1003.30 and 1003.31) and the information required under 21 CFR 1003.20.

- III. Purchaser Notification and Corrective Action. If you neither refute the finding of defect nor request an exemption, then you must: (1) notify purchasers/subsequent transferees and dealers/distributors of the defective products as specified in 21 CFR 1003.10(b), and (2) submit a written corrective action plan (CAP) for approval showing how you will fulfill your obligation under 21 CFR 1004.1 to repair, replace, or refund the cost of the defective products.
- a. Notification Letter. Requirements for preparation of notification letters are prescribed in 21 CFR 1003.21 and 1003.22. A copy of the notification letter(s) sent to purchasers and any subsequent transferees and dealers/distributors must also be sent to the FDA under 21 CFR 1003.22(a). It is recommended that you submit a draft of the notification letter(s) to us for review.
 - b. Corrective Action Plan. Instructions for preparation of a CAP may be found in 21 CFR 1004.2, 1004.3, or 1004.4. Such a plan must demonstrate how you will expeditiously correct the defect and fulfill your obligation under 21 CFR 1004.1 to repair, replace, or refund the cost of the defective products and must be approved as set out in 21 CFR 1004.6.

Your firm should take prompt action (including, but not limited to, preparation of a CAP, completion of production changes, submission of required reports, etc.) to address any defects identified in this letter

If you request additional time to prepare your refutation, notification, CAP, or evidence to support a requested exemption, we recommend you provide the reasons for any delays and a reasonable target date for the full submission of your response. Be aware that the requirements to provide purchaser/subsequent transferee/dealer/distributor notification and the provision of copies of any such notification to FDA are separate from the requirements relating to CAP. If an acceptable CAP cannot be prepared promptly, you still may be required to proceed with notification to affected persons as required by 21 CFR 1003.11(c) and 1003.21.

Section 538(a) of the Federal Food, Drug, and Cosmetic Act (Act) (21 U.S.C. 360o(a)) prohibits any person from failing to furnish notification, where required, or from failing to provide a repair, replacement, or refund of the cost of a product found to have a defect which relates to the safety of use of such product. Under Section 539(b)(1) of the Act, persons who violate section 538 of the Act may be subject to civil penalties of up to \$3,198 per violation and up to a maximum penalty of \$1,090,241 without further notification by FDA. Therefore, you are encouraged to immediately begin your preparation of accurate user location lists.

Alternatively, you may request a regulatory hearing, which is an informal hearing under 21 CFR Part 16, regarding FDA's findings identified in this letter.² See 21 CFR 1003.11(a). If you choose to do so, your

² If the materials submitted do not show that there is a genuine and substantial issue of fact that warrants a hearing, the request for a hearing may be denied in whole or in part under 21 CFR 16.26(a). See also FDA's guidance document, "Center for Devices and Radiological Health Appeals Processes," March 2, 2022, available at <https://www.fda.gov/regulatory-information/search-fda-guidance-documents/center-devices-and-radiological-health-cdrh-appeals-processes>.

request, along with any supporting materials, should be received by FDA no later than 15 days from receipt of this letter, and should be sent to the CDRH Ombudsman Program at cdrhombudsman@fda.hhs.gov, and clearly entitled "Request for Part 16 Hearing." However, a request for a regulatory hearing is **not** required to respond to this letter with a refutation as described above. Submission of your views and evidence to refute the alleged defect as a written response, in accordance with option I above, is sufficient to assure your refutation will be evaluated.

This notice of opportunity for hearing will not operate to delay or stay any administrative action, including enforcement action by FDA, unless the Commissioner, as a matter of discretion, determines that delay or a stay is in the public interest (21 CFR 16.22(d)).

Copies of the Federal Performance Standards, compliance guides, radiation safety product report guides, and other documents are available on FDA's web site at: <http://www.fda.gov/Radiation-EmittingProducts/default.htm>. Electronic product manufacturers are responsible for compliance with all applicable regulatory requirements, including, but not limited to, 21 CFR Parts 1000 through 1004, and certain sections of 21 CFR part 1005, including 21 CFR 1005.25. These regulations include requirements that manufacturers of electronic products report Accidental Radiation Occurrences where there are reasonable grounds for suspecting that such an incident has occurred (21 CFR 1000.3(a) and 21 CFR 1002.20), issue notification to the FDA and dealers/distributors and purchasers/subsequent transferees of radiation safety defects and corresponding repairs, replacements, or refunds (21 CFR Parts 1003 and 1004), and, for non-domestic manufacturers of electronic products, designate a U.S. agent (21 CFR 1005.25).

In addition to the required information described above, we request that you also include the following information in your response to CDRH: (a) list all models of UVC products your firm manufactures (or imports, or has manufactured, or has imported) that have been, or are intended to be, imported into the United States; and (b) a description of each UVC product's intended use, safety features, intended emission spectrum and intended intensity.

Please email your response (in PDF format) to both RadHealthCustomerService@fda.hhs.gov and the FDA lead reviewer (identified in the closing paragraph) and including the subject correspondence reference number.

Should you have any questions or comments pertaining to this letter, please contact Paul Lemaillet by e-mail at Paul.Lemaillet@fda.hhs.gov. In any follow-up correspondence, please clearly reference FDA reference number COR23000060 and include a contact email address.

Sincerely,

/S/

Robert Ochs, Ph.D.
Office Director
OHT8: Office of Radiological Health
Office of Product Evaluation and Quality
Center for Devices and Radiological Health