

UV-Vortex-1L R&D system for UV sanitation or UV-modifications of nutrient powders in the Ni-enriched air flow.

for evaluation tests in food, pharmaceutical, cosmetic, bio-medical, and technical applications.



UV chamber:

- diameter-30cm, height is 50cm, volume - 45l, polished stainless steel, a powder collector at its bottom,
- a manually driven quartz cleaner and Ultrasonic quartz cleaner,

Controls:

- an adjustable speed of powder circulation with Volt and Amp-controls,
- viewing the powder flow through the UV absorbing top window,
- a timer,
- T°C controllers.

The work principle:

Powder is moved around the central UVC lamp by the Ni-enriched air flow with a pre-selected flow density providing a full UV exposure to a powder flow. It is only for homogeneous and preferably one component powders or small seeds.

Applications:

- 1: The UVC spectra of the lamp lines and its continuum allows to sanitize powder particles.
- 2: UVC, UVB and UVA lines, directly or by filtered lines can be used to modify powder nutrient properties. Example: increasing a few 100`s to 1000`s times as much the vitamin D2 content in mushroom powders.

Evaluation tests

are necessary for finding optimal UV doses and circulation parameters for each powder for each of above purposes since powders vastly differ in particle sizes and its shapes, moisture content, UV absorption, micro-biological contaminations, etc.

These tests are the base for ordering our fully designed **UV tunnel for powders** in a flow-through sanitation or its photo-chemical modifications for up to 100kg/h and for further adjustments as per your powder evaluation.

Safety features:

- 1: no UVC leaks,
2. Pre-filled Nitrogen gas fully excludes the powder igniting.

El connection:

208-240 VAC, 1-phase, 50-60 Hz, max ca. 50W.

Size, Weight, Enclosure Material:

60cm wide x 40cm high x 53cm deep,
Polished stainless-steel, weight 42 kg.

Maintenance:

top flange, blower, collector, return tubes are de-assembled for cleaning.

Please, submit your requirements for our evaluation tests.

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