BLAM: Blaustein Atomizer

FEATURES

- Increased viability for vegetative bacteria aerosols
- Minimization of foaming when used with proteinic solutions
- Can be operated in both recirculation and one-pass mode
- Accurate control of liquid feed rate in one-pass mode
- Resistant to frequent decontamination procedures with chemicals or autoclaving
- Wide range of output
- Very high aerosolization efficiency
- Modular design, multi-use

DESCRIPTION

The newly developed high output BLAM atomizer uses the jet nebulization principle of the Collison Nebulizer, which has long been the recognized as the technique for the efficient aerosolization of various liquids. However, the BLAM relies on a new, patent pending design, which allows for a more efficient generation of aerosol than the Collison or other existing devices, in both its single pass and recirculating configurations. This innovative design allows users to produce liquid aerosol at high particle concentrations and very narrow particle size distribution.

The BLAM can be used as a retrofit for existing Collison-type nebulizers. The retrofit kit is packaged as a direct nozzle replacement for many BGI by Mesa Collison nebulizers.

The BLAM can be used in one-pass mode, with the liquid feed being injected externally by a metering device, or re-circulation mode where the atomizer jar is pre-filled with the liquid test article and being cyclically atomized until is exhausted. A one-jet BLAM nozzle is intended to function for use in the Single Pass Atomization (SPA) mode where media is subjected to the sonic air jet only one time (single pass). The alternative design, a multi jet BLAM can function in SPA mode or Multi Pass Atomization (MPA) mode where media is recirculated to the two or more sonic velocity air jets.

APPLICATION EXAMPLES:

- Aerobiology
- Biodefense Research
- Drug Discovery
- Aerosol Exposure Challenges
- Pesticides inhalation toxicity testing

SPECIFICATIONS

Particle diameter: approx. 0.4 µm - 8 µm

Geometrical standard deviation: ~ 1.4

Volume flow: 2-32 L/min

Models: 1-, 4- and 8 jet