

LB30 Manual



Liability Note: The manufacturer assumes NO liability for damage however caused in the handling & usage of the nebulizers. Use at your own risk.

Caution: Do Not Handle unless you are sure that the nebulizer is dry, or washed with clean water. Acids, particularly HF, often look like water and will wet the end of the nebulizer during usage.

Warning: This device operates on compressed gases. Appropriate care must be taken. If in doubt about correct operating procedures, call an experienced operator or call Burgener Research at +1 905 823 3535.

DO NOT TOUCH THE TIP! The gas orifice at the tip of the nebulizer is Teflon, and is SOFT. This tip is very easily damaged and should NEVER be touched with fingers, tissues, or anything else. If the tip is accidentally touched, and the nebulizer continues to operate, then it is still functional, and its use can be safely continued.

It is recommended that the red Nebulizer safety cap is kept on the Nebulizer while not in use. This will protect the tip from accidental damage.

Dropping and Breakage: Burgener Nebulizer bodies are strong and generally will not break. If a nebulizer is dropped such that the tip is deformed, then it will be irreparably damaged. If it continues to operate after being dropped, then it has not been affected, and it is safe to use.

Operating Instructions

1. Optimum Gas Flow Rate & Pressures

The LB 30 nebulizer has been run at 120 psi, with the gas flowing from the nebulizer into atmospheric pressure gas. LB 30 nebulizers usually run at a nominal 60-90 psi for good mist. You can expect a reasonable mist at pressures from 50 psi (3 bar) to 100 psi (7 bar). However, the higher the gas pressure, the better the mist will be, and similarly, as the gas pressure decreases, the mist will have larger droplets.

Generally, higher gas pressures produce finer mists. Generally higher gas flow rates produce finer mists.

2. Liquid Flow Rates

The standard LB 30 has 10/32 fittings for the gas line and the liquid line. Various adapters can be attached to the 10/32 fittings. We have included a 2mm line for the gas and liquid which should allow 30+ ml/min liquid flows with no problems. The range of liquid flow is from less than 1 ml/min up to about 30 ml/min. You may get excellent mists at much lower and higher flows depending on the surface tension of the liquid being run. Water is one of the most difficult to atomize, and Alcohol is one of the easiest. If the surface tension of the liquid is high, the low flow range goes up. If the surface tension is low, the lowest flow rates go down.

3. Orientation

The LB 30 has a large diameter capillary for the liquid. For flow rates of 2 ml/min or more, orientation is not a problem. For lower flow rates, the nebulizer can grab the liquid faster than it may be delivered, causing pulsing in the aerosol and larger drops. If the nebulizer is aiming up, then the liquid can fill the insides of the liquid passage and then even very low flows should run without pulsing. You should be able to run low flow rates as low as a few microliters per minute.

4. Droppage and Breaking

The Burgener LB 30 Nebulizer is PTFE Teflon. If you drop it, it may be dented where it hits. If you dent the body of the nebulizer, it will not effect its performance. If the tip is dented, it may destroy the nebulizer. If it works after dropping, it has not been effected, and may be continued to be relied upon.

5. Check which line is the Gas or Liquid

If mist is very poor the first time you are running it, chances are that you have switched the gas line with the liquid line. The lines and fittings are the same for both. The gas should be the central line, and the liquid comes in from the side. If switched, it will not harm the nebulizer, but it will not run well either.