Phillips Medisize
a molex company

FOX™ Vibrating Mesh Nebulizer

The FOX device is a handheld, breath-activated, battery-powered inhalation system that delivers nebulized liquid drugs with high performance using a vibrating mesh technology.

The FOX device is suitable for the delivery of small molecules and biologics formulated as solutions or nanosuspensions.

Fox Vibrating Mesh Nebulizer Data

Breath activated
Reduced medication waste and improved efficiency.[1] The patient is in control of their dosing.

Low inspiration flow rate
Maximizes lung delivery.[2]

Guided inhalation
LED feedback and air control guide patient use.

Bluetooth™ connectivity
Available for digital health applications, including monitoring adherence and compliance.

CE marked
Has a 510(k) premarket notification for marketing in the US.

Formulation optimization
Services available to support product development.

BRING YOUR PRODUCT TO LIFE WITH DISCOVERY TO DELIVERY CAPABILITIES

Industry-leading innovation requires industry-leading expertise. At Phillips Medisize, a Molex company, our unique capabilities help customers deliver safe and effective solutions that can help people live healthier, more productive lives. From front-end innovation and development to manufacturing and post launch, we work with you at every step — or any stage in between — to help your product succeed in the market.

1. Gessler T, Hossein-Ardeschir G, Held M, et al. The safety and pharmacokinetics of rapid iloprost aerosol delivery via the BREELIB nebulizer in pulmonary arterial hypertension. Pulm Circ. 2017;7:505–513.

2. Brand P, Friemel I, Meyer T, Schulz H, Heyder J, Haubetainger K. Total deposition of therapeutic particles during spontaneous and controlled inhalations. J Pharm Sci. 2000;89:724–731

FOX™ Vibrating Mesh Nebulizer

Product Information	Fill Volume (mL)	Delivered Dose (%)	Residual Dose (%)	Treatment Time (minutes)	Average Droplet Size (µm)	GSD
Solution (0.1% w/v albuterol)	2	92	7	9	4.3*	1.5*
Biologic (50 mg/mL recombinant protein; viscosity: 1.4 cP)	1	97	3	6	4.7	1.5
Liposome (small molecule)	0.5	91	8	4	4.3	1.5

Device maximum fill volume is 4 mL. *Droplet size information from FOX MOBILE manufacturing data using 0.9% w/v NaCl. Treatment time is estimated by adjusting the number of breaths by a simulated inhalation/exhalation time. Product performance is formulation dependent.

Platform specifications

Fill volume range 0.1–4.0 mL

Charge Time: 15 minutes as per IFU

Solution performance (salbutamol sulphate)

Delivered dose: 92%

Residual dose: 7%

Percentage of fill volume emitted per minute: 26%

Average droplet size: 4.3 µm (Range: 3.4–4.9 µm)

GSD: 1.5 (Range: 1.4–1.6)

Delivered dose, residual dose and delivery rate performance of FOX MOBILE with a 2 mL fill of 1 mg/ml salbutamol (i.e. 0.1% w/v albuterol) in 0.9% sodium chloride solution in accordance with EN ISO 27427:2019. Data is reported as a percentage of nominal filled dose. Droplet size information collated from FOX MOBILE manufacturing data.

Biologic performance (50 mg/mL recombinant protein)

Delivered dose performance: 97%

Residual dose: 3%

Output rate: 0.51 g/min

%FPF <5 µm: 50.9–60.3%

Delivered dose, residual dose and volume performance of FOX MOBILE with a 1 mL fill of 50 mg/mL recombinant protein (Viscosity: 1.4 cP). Gravimetric data is reported as a percentage of nominal filled dose

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