

# Measure breath nitric oxide for airway inflammation with the **NObreath**<sup>®</sup> FeNO monitor



*Aids in the diagnosis and management of asthma, one breath at a time.*

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## Fractional Exhaled Nitric Oxide (FeNO)

Fractional exhaled nitric oxide is a good marker for eosinophilic airway inflammation, and is considered to be a good indicator of corticosteroid response<sup>1</sup>.

The production of nitric oxide is often found to be higher in inflammatory conditions such as asthma and therefore FeNO monitoring can be used for the detection and management of such conditions<sup>2</sup>, but also to differentiate between COPD, ACOS and other interstitial lung diseases that are not assessed by other means, such as lung function<sup>3</sup>.

Nitric oxide measurement is not intended as a stand-alone method for diagnosis and should be used in conjunction with other evaluation methods and tests<sup>4</sup>.

Fractional exhaled nitric oxide measurement is a simple, rapid, highly reproducible, and non-invasive method of airway inflammation assessment, which until now, has been an expensive test to deliver in everyday practice<sup>5</sup>.

### Benefits of performing FeNO tests:

- Non-invasive, quick and easy to perform<sup>5</sup>
- Aids in asthma management, assisting the correct prescription and making monitored adjustments
- Shows patient adherence to treatment<sup>9</sup>
- Aids in identifying good and poor adherence to corticosteroid treatment<sup>1</sup>
- Good indicator of corticosteroid response<sup>1</sup>
- Shown to be superior to the majority of conventional tests of lung function, such as peak flow recording and spirometry<sup>5</sup>
- Aids in differentiating between allergic (eosinophilic) and non-allergic asthma<sup>7</sup>.



# NObreath® features

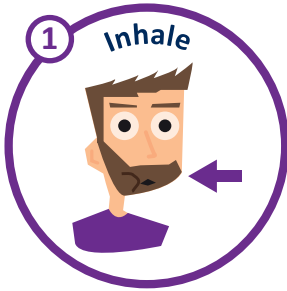
An ergonomic design, fully-portable and incorporated with SteriTouCh® technology for optimum infection control.



\*Subject to correct use, maintenance and service. Tested up to 29,000 tests.

# Measuring FeNO with NObreath®

IT'S AS EASY AS:



## Consumables

### NObreath® Mouthpiece

The NObreath® uses a single-patient use mouthpiece, which contains an integrated infection control filter that removes and traps >99% of airborne bacteria and >98% of viruses<sup>8</sup>.



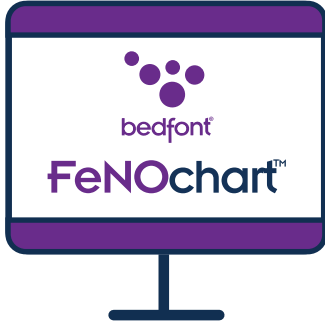
# Technical specification

<b>Concentration range</b>		5-500ppb
<b>Display</b>		Full colour touchscreen
<b>Detection principle</b>		Electrochemical sensor
<b>Repeatability</b>		±5ppb of measured value ≤ 50ppb ±10% of measured value > 50ppb
<b>Accuracy</b>		±5ppb of measured value ≤ 50ppb ±10% of measured value > 50ppb
<b>Power</b>	<b>NObreath® monitor</b>	1 x main rechargeable Li-ion battery- Approx. 100 uses on fully charged battery 2 x Li-ion coin cell battery- Approx. 5 years Input: 5V, 0.5A
	<b>NObreath® Dock</b>	Mains powered Input: 5V, 0.5A Output: 5V, 0.5A
	<b>Plug</b>	Input: 100-240V ~ 50/60Hz., 0.2A Output: 5.0V, 1.0A
<b>T<sub>90</sub> response time</b>		≤10 seconds
<b>Temperature</b>	<b>Operating</b>	15-30°C
	<b>Storage/transport</b>	0-50°C
<b>Humidity</b>	<b>Operating</b>	20-80% RH (non-condensing)
	<b>Storage/transport</b>	5-95% RH (non-condensing)
<b>Operating/storage/transport pressure</b>		800 – 1080mbar
<b>Sensor operating life</b>		5 years (Subject to servicing)
<b>Sensor sensitivity</b>		1ppb
<b>Sensor drift</b>		<5% per annum
<b>Dimensions</b>		Approx. 90 x 159 x 59 mm
<b>Weight</b>		Approx. 400g
<b>Materials</b>	<b>NObreath® monitor</b>	Case: polycarbonate/abs blend SteriTouch® anti-microbial additive
	<b>NObreath® Dock</b>	
	<b>NObreath mouthpiece</b>	Polypropylene
<b>Breath test time</b>		Adult: 12 seconds Child: 10 seconds Ambient: 30 seconds
<b>Warm-up time</b>		≤60 seconds
<b>Maximum ambient operating level</b>		350 ppb NO
<b>CO cross interference</b>		45ppm ≤17.6 ppb



## FeNOchart™

FeNOchart™ is free patient management software available with every NObreath®. FeNOchart™ enables you to track patients' progress, view live readings, download results plus much more.



**FREE FeNOchart™ patient management software.**

## NObreath® Forum

Purchasing a NObreath® entitles you to free membership of the NObreath® forum. The NObreath® forum is an international, invitation-only platform where professionals using the Bedfont® NObreath® FeNO monitor can communicate, share experiences and knowledge, and ask for other professional opinions. There is no cost or obligation to participate and membership is free when you purchase a NObreath®.



# Using FeNO to assist diagnosis

Measuring airway inflammation with NObreath® can help monitor the effectiveness

## Aid in diagnosis using the NObreath® FeNO monitor

FeNO (ppb) Levels	LOW <25ppb (<20ppb in children)	INTERMEDIATE 25-50ppb (20-35ppb in children)	HIGH >50ppb (>35ppb in children) or rise in FeNO of >40% from previously stable levels
<b>Symptomatic</b> (chronic cough and/or wheeze and/or shortness of breath during past 6 wk)	Eosinophilic airway inflammation unlikely  Alternative diagnosis  Unlikely to benefit from ICS	Be cautious  Evaluate clinical context  Monitor change in FeNO over time	Eosinophilic airway inflammation present  Likely to benefit from ICS

## Alternative considerations (if Allergic Asthma has been dismissed)<sup>2</sup>

- Non-Allergic Asthma
- Chronic cough
- Vocal Chord Dysfunction
- GERD

Nitric oxide measurement is not intended as a stand-alone method for diagnosis and should be used in conjunction with other evaluation methods and tests<sup>4</sup>.



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# & management of Asthma

of medication and can be used to predict the risk of Asthma attacks\*.

## Monitoring (in patients with diagnosed asthma) using the NObreath® FeNO monitor

FeNO (ppb) Levels	LOW <25ppb (<20ppb in children)	INTERMEDIATE 25-50ppb (20-35ppb in children)	HIGH >50ppb (>35ppb in children) or rise in FeNO of >40% from previously stable levels
<b>Symptomatic</b> (chronic cough and/or wheeze and/or shortness of breath during past 6 wk)	Possible alternative diagnosis.  Unlikely to benefit from increase in ICS	Persistent allergen exposure  Inadequate ICS dose  Poor adherence  Steroid resistance	Persistent allergen exposure  Poor adherence or inhaler technique  Inadequate ICS dose  Risk of Exacerbation  Steroid resistance
<b>Symptoms Absent</b>	Adequate ICS dose  Good adherence  ICS taper	Adequate ICS dosing  Good adherence  Monitor Change in FeNO	ICS withdrawal or dose reduction may result in relapse  Poor adherence or inhaler technique

## References

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\* FeNO is not a definitive indication of asthma and should be used in conjunction with (but not limited to) spirometry, patient history, symptoms.

\*\*Allergic = Eosinophilic / Non- Allergic = Non-Eosinophilic

on 1300 136 855 or [info@nichemedical.com.au](mailto:info@nichemedical.com.au)



Contact Bedfont® or one of our worldwide **NObreath®** distributors for a free demonstration.

***Our family, innovating health, for yours.***

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Telephone 1300 136 855  
Email: [info@nichemedical.com.au](mailto:info@nichemedical.com.au)  
[www.nichemedical.com.au](http://www.nichemedical.com.au)