



Nitrogen Dioxide Gas  
Breakthrough Indicator  
For Carbon Absorbers  
NO<sub>2</sub> BTI 2  
(PN: 419)



*Manual*



### 1. Application

The Nitrogen Dioxide BTI 2 (PN: 419) is qualitative (yes/no) colorimetric indicator for the end-of-service life of carbon absorbers and filters. It is designed to provide real-time indication of the breakthrough of nitrogen dioxide gas.

### 2. Specifications

a. Weight:	129.5g (4.6oz)
b. Dimensions:	11.43cm (4.5in), diameter 5.08cm (2.0in)
c. Inlet dimensions:	1.5" MNPT
d. Operating temperature:	-20°C to 55°C (-4°F to 131°F)
e. Operating humidity:	5% RH to 90%RH
f. Minimum detectable limit:	0.5ppm-hr at 30 cm/sec face velocity
g. Color change:	Off white to gray to black
h. Storage temperature:	4°C to 25°C, (39°F to 77°F)
i. Shelf life:	14 months at 4°C to 25°C, (39°F to 77°F)
j. Service life:	14 months
k. Light effect:	None

Cross interferences: Other nitrogen oxides and strong oxidizers produce similar color. No other interferences are known.

### 3. Operating Instructions

- Ensure that packaging pouch is intact.
- Open packaging pouch by tearing off the top part from one of side notches.
- Remove the Breakthrough Indicator from the packaging pouch.
- Remove the 1.5" threaded plug from the carbon absorber outlet lid.
- Remove the protective red plug to activate the breakthrough indicator.
- Thread the Breakthrough Indicator into the 1.5" threaded carbon absorber outlet lid.



Caution: Only hand tighten indicator into carbon absorber

- Replace carbon absorber when the Breakthrough Indicator changes color to gray.



Filter is good



Replace filter

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