filligent
creating
global health choices

**Revolutionary**
Intelligent Filtration System

# MicroBlue™ Filter Rods

Reduced-Toxicity Technology

## Gen 3 Series

(Standard Acetate & MicroBlue™ **Paper**)

> "Reduced toxicity with smoker satisfaction..."

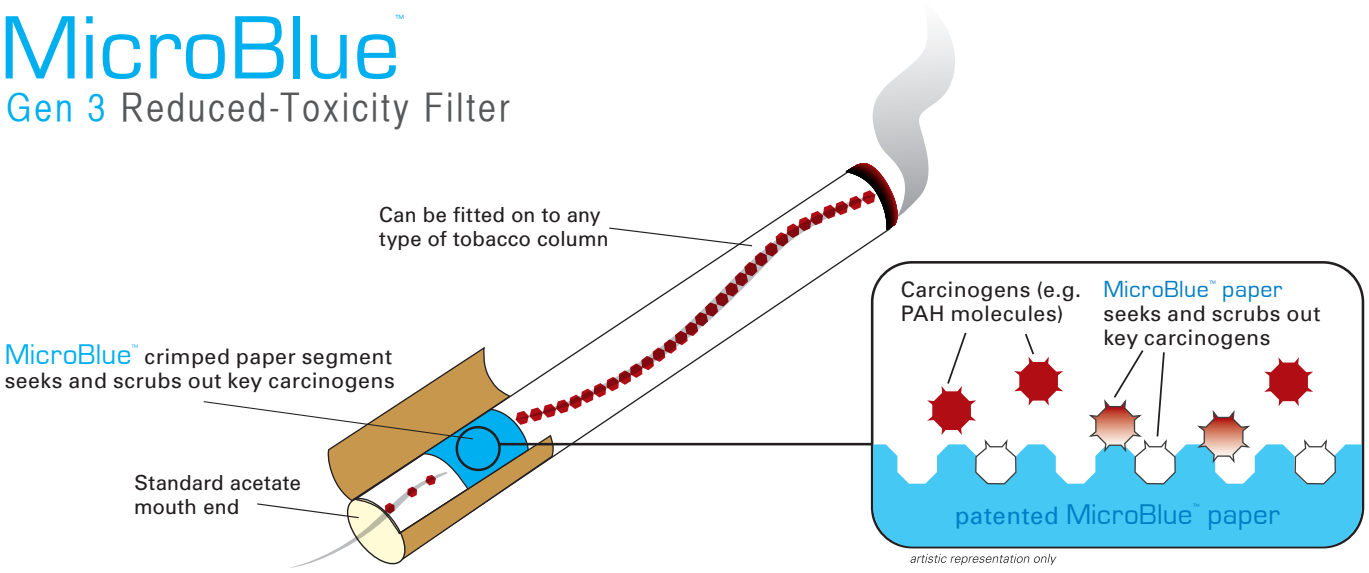
- **Selective molecular filtration**
  - **Significant reduction in overall toxicity and specific constituents**
  - **Minor change in nicotine (<15%)**
- Safe, cost-effective components
- Standard and custom filter configurations
- Independently tested pursuant to **US FDA standards** (e.g. safety and threshold cancer risk assessment)

| Reduction Relative to Leading 'Light' | |
|---|---|
| Mutagenicity* (Ames) | 40% |
| Cytotoxicity (NRU) | 20% |
| Benzo[a]pyrene (PAH) | 20% |
| Crotonaldehyde (aldehyde) | 40% |
| NNK (TSNA) | 45% |
| Tar | <15% |
| Nicotine | <15% |
| Pressure drop | No change |

** Ames Test TA-100/+9: Base-pair DNA mutations are the molecular signature for tobacco-induced lung cancer.*

# MicroBlue™

Gen 3 Reduced-Toxicity Filter




*artistic representation only*

## Pragmatic • Scientific • Patented

For more information on the MicroBlue™ range of Reduced-Toxicity products – contact.us@filligent.com

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## Scientific Explanation

The **MicroBlue**™ reduced-toxicity filtration technology includes an innovative yet inexpensive material that selectively binds and inactivates many of the carcinogens in cigarette smoke. The "scavenging" activity is due to its high molecular affinity for Polycyclic Aromatic Hydrocarbons (PAHs) and other classes of carcinogens found in smoke. This intelligent and selective filtration leaves nicotine, taste and draw and other smoking sensations largely untouched. The **MicroBlue**™ technology is safe and does not add anything to mainstream smoke; its only effect on smoke is to selectively remove a significant amount of harmful carcinogens.

## Testing Protocols

- All tests were conducted in internationally accredited laboratories (including Filligent's ISO 17025:2003 certified laboratory).
- All test samples use a standard Leading Light cigarette. The only change is the use of a **MicroBlue**™ filter of the same dimensions for **MicroBlue**™ samples. This permits a direct comparison of the relative efficacy of the filters, by keeping all else equal.
- Smoke chemistry and condensate collection: Health Canada Intense Smoking Regime with 100% vent blocking.
- Base-pair DNA damage: Ames Reverse Bacterial Mutation Assay (HC T-501); TA-100 strain of Salmonella Typhimurium with S9 activation. This is the standard threshold cancer-risk assessment test used by Health Canada, the FDA and OECD for assessing base-pair mutations, which are the molecular signature for tobacco-induced lung cancer.

## Test Results

| Constituent | International Standard Test | Reduction Relative to Leading Light | Comments |
|---|---|---|---|
| Tar | Health Canada T-115 | <15% | Measured with 100% ventilation blocking |
| Nicotine | Health Canada T-115 | <15% | Measured with 100% ventilation blocking |
| Carbon monoxide | Health Canada T-115 | NM | Measured with 100% ventilation blocking |
| Pressure drop | CORESTA N°41 | NM | Draw resistance of cigarettes and filter rods |
| Mutagenicity (Ames) | Health Canada T-501 | 40% | Using the TA-100 strain +S9. This is the standard threshold cancer-risk assessment test used by Health Canada, the US FDA and OECD for base-pair DNA mutations, which are the molecular signature for tobacco-induced lung cancer |
| Cytotoxicity (NRU) | Health Canada T-502 | 20% | This is the standard threshold test for assessing overall cell death, which can contribute to a host of tobacco-induced diseases such as chronic obstructive pulmonary disease |
| Benzo[a]pyrene | CORESTA N°58 | 20% | Principal representative for polycyclic aromatic hydrocarbons |
| Crotonaldehyde | Health Canada T-104 | 40% | Principal representative for carbonyls (aldehydes) |
| NNK (TSNA) | Health Canada T-111 | 45% | Principal representative carcinogen for Tobacco specific nitrosamines |

*NM = Not Material, i.e., the test results were within one standard deviation

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Rev 7