

## Heated Tobacco Products analytical test equipment

For 75 years, Cerulean has been synonymous with the supply of precision test and measurement equipment solutions for the tobacco industry.

As the tobacco industry continues to evolve, innovate and develop reduced toxicant alternatives to conventional tobacco products; Cerulean continues to advance its products and solutions. This agile approach has allowed Cerulean to offer innovative analytical test equipment and maintain the close collaboration with tobacco companies; supporting the industry towards achieving their reduced toxicant tobacco products goal.

Cerulean has a broad range of analytical test equipment specifically designed for heated tobacco product tests.

### HTP Physical Quality Parameters

Heated tobacco products (HTPs) pose challenges to manufactures, who are facing questions about the unique characteristics and diversity of these products and how to test them as there is no internationally agreed approach for testing physical characteristics of these products.

Heated tobacco sticks are generally shorter than the standard king size cigarettes and consist of a number of different segments made from different materials such as reconstituted tobacco rod, hollow acetate tube, polymer film filter and cellulose acetate mouthpiece. In addition to the traditional tobacco industry testing parameters as weight, size pressure drop, ventilation and hardness now the HTP producers are interested in the physical characteristics of the individual components.

Designed for laboratory and routine factory floor quality assurance the well-established Cerulean Quantum Neo testing instrument range is offering the ideal solution for measuring the segments length and diameter, gap between the segments, metal overwrap, capsule position and integrity, tipping paper overwrap and many more brand specific features. Tried, tested and trusted by the operators, technicians and QA personnel, Quantum Neo is offering robust, accurate, easy to use and cost effective way for physical testing of all commercially available heated tobacco products and is a great investment for the future.

### HTP Aerosol Chemistry

The heated tobacco product is classified into three categories i.e. electrically heated tobacco products (eHTPs), carbon-tip heated tobacco products (cHTPs) and aerosol (hybrid) heated tobacco products (aHTP).

Although, there are no universal developed regulatory standards for testing these Heated Tobacco Products (HTPs). However, the tobacco industry has adapted the methods/techniques used in testing e-cigarettes and conventional cigarettes for testing these HTPs, for instance the methods for testing e-cigarettes has been adapted for eHTPs test\* (i.e. Canadian Intense regime 55 ml, 3s, 30s, square-shaped puff profile), but with the addition of Carbon Monoxide (CO) and total Nitrogen Oxide (NOx) analysis. Whilst, the methods for testing conventional cigarettes (i.e. ISO 3308) has been adapted for cHTPs test.

Whether your HTP tests involve aerosol capture via Cambridge Filter Holders (CFHs), impingers (Hoffmann analysis), electrostatic precipitation for heavy metals for further analysis or performing in-line Carbon Monoxide (CO) and total Nitrogen Oxide (NOx) analysis, Cerulean have a broad range of analytical vaping/smoking machines and accessories to meet your HTP emission testing needs. Cerulean also have dedicated equipment for generating aerosol continuously onto cell cultures for toxicology studies. Cerulean has a range of great analytical tools such as end-point detection system, aerosol temperature measurement system and in-line CO measurement system that allows aerosol density, temperature and CO (ppm) level to be measured on a puff-by-puff basis from heated tobacco products.

Cerulean's innovation (R&D) team coupled with close collaboration with a variety of key HTP manufacturers and Contract Research Organisation (CROs) has enabled Cerulean to continuously to innovate its products and solutions to providing turnkey solutions for heated tobacco product tests.



SM450e



Quantum Neo



EDS-1



SM450 NGP



EFA 100



Orbit 20



### Find out more

If you would like to know more about Cerulean's range of HTP products and solutions, please contact us via [info@cerulean.com](mailto:info@cerulean.com)



\*as specified by BSI PAS 8850:2020 - Heated tobacco products and electrical tobacco heating devices specification