

Corona CAD Charged Aerosol Detector



The Corona® CAD® is an HPLC detector that delivers near universal detection and quantitation. None of the traditional universal detectors for HPLC have delivered on the promise of combining application versatility with real performance.

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Thermo Scientific brand

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HPLC with UV detection is a widely used and accepted analytical technique. However, there are times when the lack of a chromophore is limiting. To address this problem some laboratories have turned to Mass Spec. But not all compounds ionize readily and the response of those that do can vary widely. Refractive Index detection lacks sensitivity, can not be used with gradient and is often difficult to operate due to drift and instability. Evaporative Light Scattering Detection accommodates gradient HPLC but suffers from fundamental limitations imposed by the physics of light scattering.

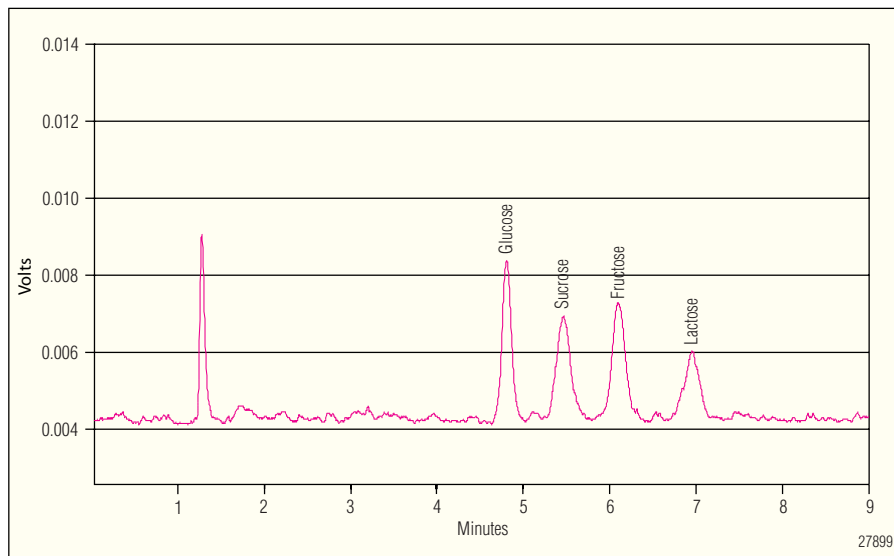
There is a clear need for a detector that addresses these challenges. Charged aerosol detection is a non-optical detection technology for HPLC derived from proven particle characterization techniques. Because the entire process involves particles and direct measurement of charge, the Corona CAD detector is highly sensitive and consistent, providing response independent of chemical structure.

Corona CAD: the Ideal Detector for your HPLC

- **Broad Applicability**—Measures virtually any non- and many semivolatile analytes including lipids, carbohydrates, surfactants, and polymers.
- **Response Independent of Chemical Structure**—Lets you estimate relative amounts of analytes.
- **Predictable Response**—You know what to expect, thus simplifying methods development.
- **High Sensitivity**—Low nanogram levels of analytes can be detected.
- **Wide and Useful Dynamic Range**—Over four orders of magnitude. Measures ng- μ g quantities for real samples, not just standards.
- **Ease of Use**—Fully gradient compatible. Just set the gas and run.

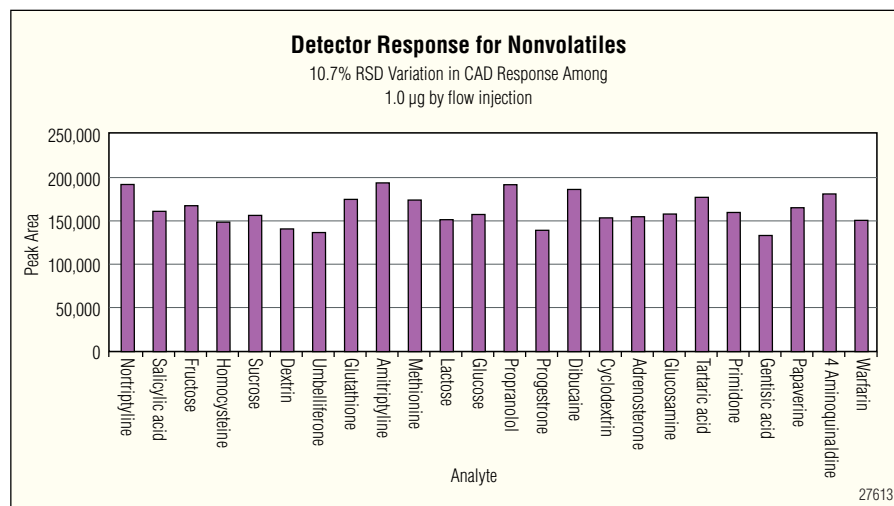
High Sensitivity and Reproducibility

The Corona CAD can readily detect compounds present in single digit nano-gram quantities. In this example, 10 ng each of four carbohydrates are easily detected, well above the detection limit.



Consistent Response Independent of Structure

As shown in the figure, CAD response by flow injection analysis is very similar for equivalent amounts of a wide diversity of structures.



CORONA CAD DETECTOR SPECIFICATIONS*

Operating Mode

Charged Aerosol Detection

Mobile Phase Flow Rate

Up to 2 mL/min

Full Scale Output Range

1 pA to 470 pA

Filter Time Constants

None, Low, Medium, High

Signal Output

0 V to 1 V DC

Output Resolution

0.12 μ V at 1 V full scale
(24 bit bipolar)

Function Keys

Autozero, Event Marker, Gas On/Off

Method Storage

Up to 25 methods

Programmable Events

Gas (on/off)

Set Output Contact

Closures (4), Autozero, Filter, Marker

Current Range

Hold, Loop, Reset Parameters.

External Requirements

Power

100-240 VAC, 50/60 Hz, 100 VA

Operating Pressure

35 psi (3.5 MPa)

Gas Flow Rate

4 L/min

Physical Specifications

Detector Module

20.5" L \times 9" W \times 11.25" H at 22 lbs
(52.5 cm \times 23 cm \times 28.6 cm at 10 kg)

Certifications

CE, UL, CSA, FCC

*Specifications subject to change without notice.

ORDERING INFORMATION

In the U.S., call (800) 346-6390 or contact the Dionex Regional Office nearest you. Outside the U.S., order through your local Dionex office or distributor. Refer to the following part numbers:

Description	Part Number
Corona Charged Aerosol Detector with Accessories (100/220V)	70-9116
Nitrogen Generator, Benchtop, 99% Purity	70-6003

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Passion. Power. Productivity.



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