



National Electrostatics Corp.

CARBS IBA ACCELERATOR SYSTEM



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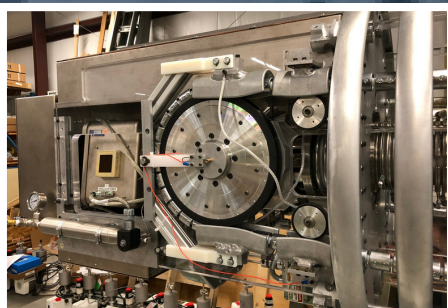
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NEC offers the CARBS System, a completely automated instrument for ion beam analysis (IBA).

- 2.5 MV terminal
- Single-ended
- S-series column
- 2 chains ($\geq 120 \mu\text{A}$ beam current)
- Capacitive linear ripple $< 80 \text{ Vrms}$
- $\sim 500 \text{ V}$ Stability
- (+) RF ion source



IBA Application:

Particle Induced X-Ray Emission (PIXE) - Air Filtration

- Bombards sample with high-energy protons
- Interaction emits characteristic X-rays
- These X-rays can be detected & analyzed to determine the elemental composition of the sample
- Understanding of diverse samples & aids in development of policies for healthier living environments*

*PM_{2.5} particles can be 50x smaller than the diameter of a single strand of human hair, but cause significant health risks in urban areas