

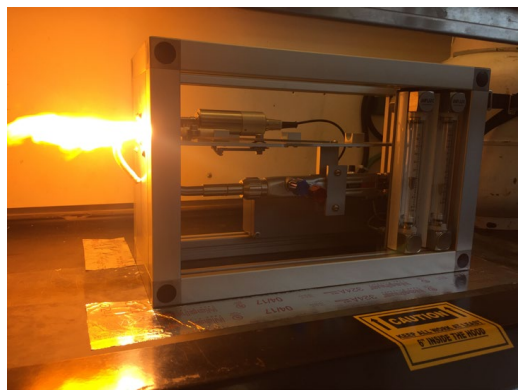
Project Description

- Characterize the a Thermal Flame Generator that uses for HVAC filter loading experiment
- Adjust operational parameters and salt type to generate particles with a size distribution similar to urban aerosol size distribution

Approach

Adjust following parameters

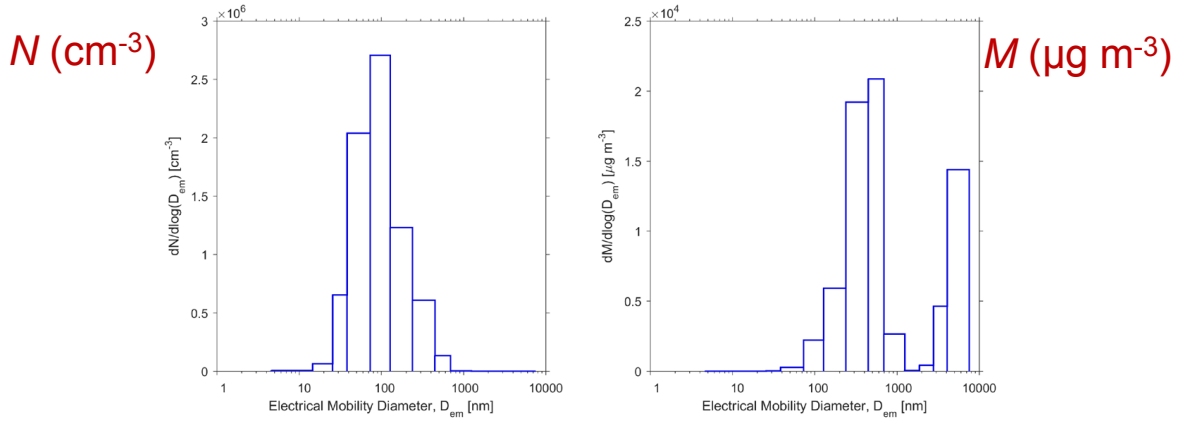
- Salt Type:
- NaCl, KCl
- Salt stick thickness
- 10 mm, 12 mm
- Salt stick feed rate (FR)
- 1 – 25 mm/min



Discussion

The salt particle size distribution (PSD) can be affected by salt type (different physical properties), salt stick thickness (different vapor conc.), and feed rate (different vapor conc.).

Results



NaCl

NaCl salt stick ($\Phi=10\text{mm}$), $\text{FR}=5 \text{ mm/min}$: PSD similar to urban aerosol size distribution