

TETRACONTANE SIZE DISTRIBUTION & REMOVAL EFFICIENCY

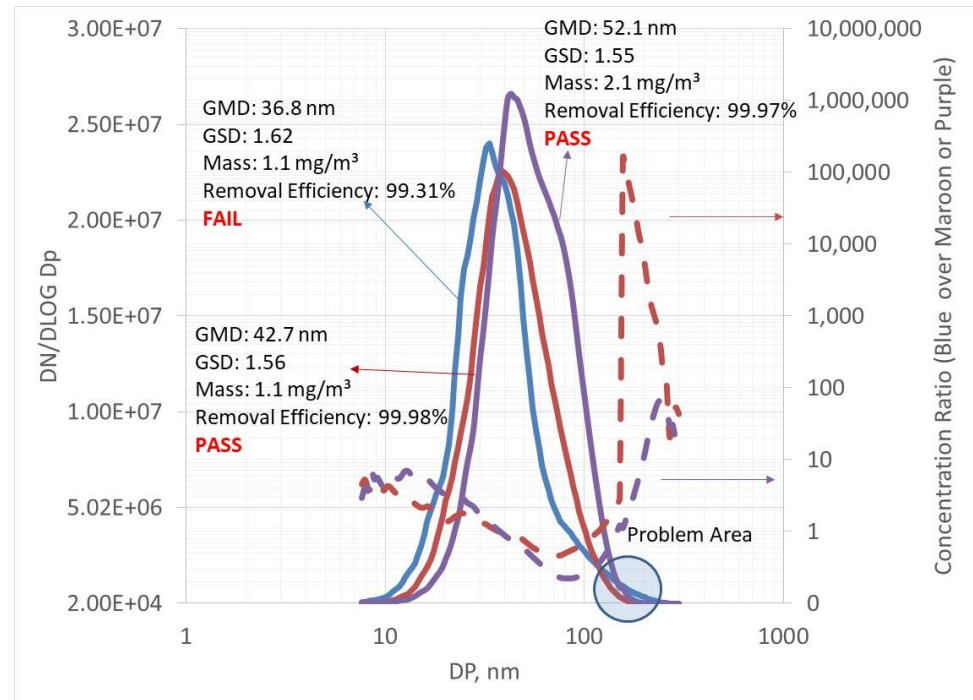
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Tetracontane Size Distribution (Pass/Fail)

- Pass/Fail is very sensitive to the characteristics of the size distribution, especially
 - Geometric Standard Deviation (GSD)
 - Upper Tail of the distribution
- To avoid such problems in calibration, we recommend defining the size distribution to have GMD value > 30 nm instead of 50 nm, while keeping the concentration > 1 mg/m³
- Also make sure to avoid particles $> \sim 120$ nm



If the inlet concentration is $1e7$ part./cm³ at a dilution ratio of 100, all you need is >100 part./cm³ to survive and fail the removal efficiency. The cause for the failure is typically surviving particles with a size around 10 to 15 nm in diameter.



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