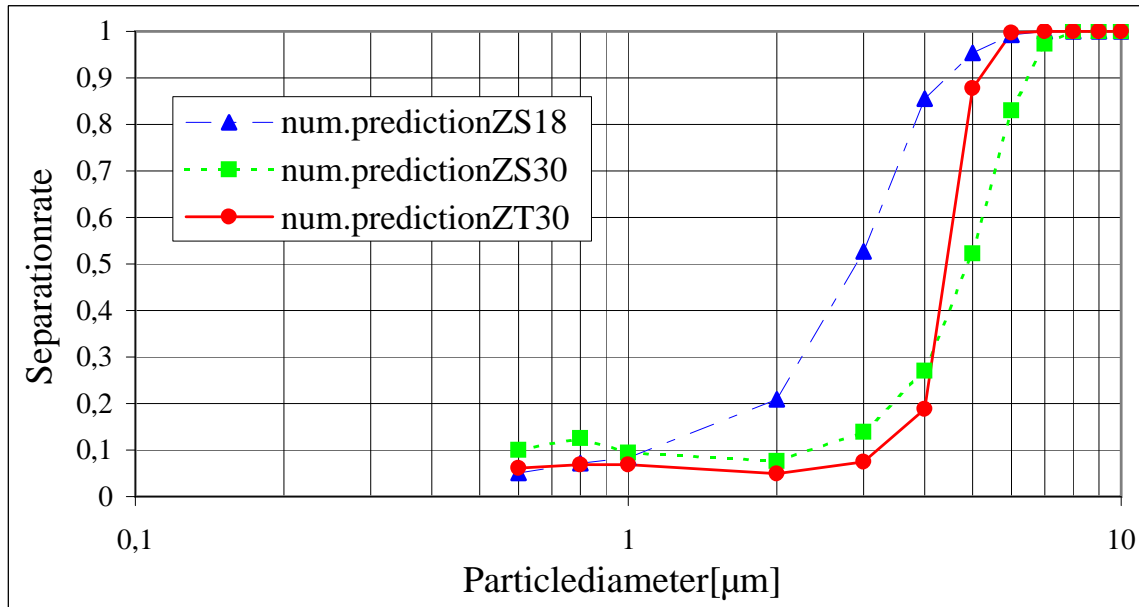


## Comparison of numerically predicted separation rates for ZS18, ZS30 and ZT30



Numerical results obtained using the strong particle separation criterion :

- cyclon ZS18 with smaller gap width at the apex cone ( $h_{ac} = 18.7 \text{ mm}$ ) shows better particle separation as both cyclones with larger gap width ( $h_{ac} = 30.0 \text{ mm}$ )
- for the same gap width cyclones ZS30 and ZT30 show similar performance

⇒ this result seems to be caused by the numbers of particles recirculating from the particle settling chamber back into the main vortex chamber of the cyclone

⇒ comparison with experimental results show that this particle recirculation seems to be less important under experimental conditions

⇒ strong particle agglomeration in the particle settling chamber could be an explanation



### Investigation of Particle Separation in Symmetrical Double Cyclone Separators

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