HORIBA FINDINGS SUB-23

Additional Information in comparison to PEMs4Nano

03-Apr-2019, Philipp Kreutziger

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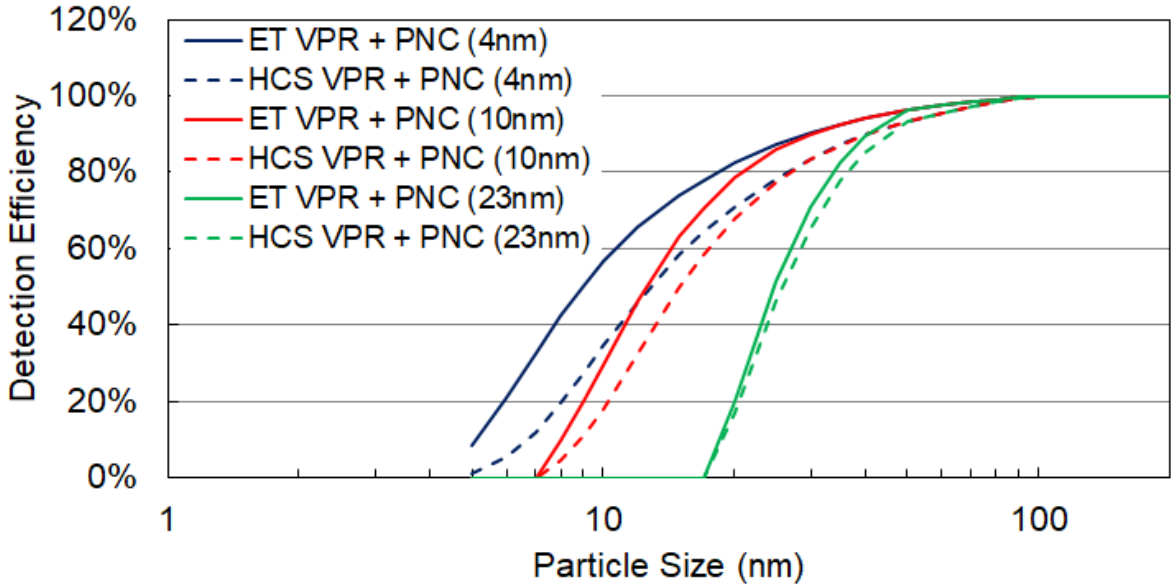
System Setup for Sub-23nm

Evaporation Tube and Catalytic Stripper use in SPCS

Citation of Poster (Y. Otsuki, ETH Zurich conference 2014)

- Overall detection efficiencies of the system were estimated by verified PNC detection efficiencies and penetrations of VPR and PTT
- Difference between HCS and ET VPRs was significant with PNC which has smaller D50 than 23nm (current legislation)
- VPR penetration is dominant to the overall detection efficiency of the solid particle number measurement system



- ➢ Since 2014, development of HCS is ongoing
- ➢ Particle Losses have been reduced in the HCS, but they are always higher than in an Evaporation tube.

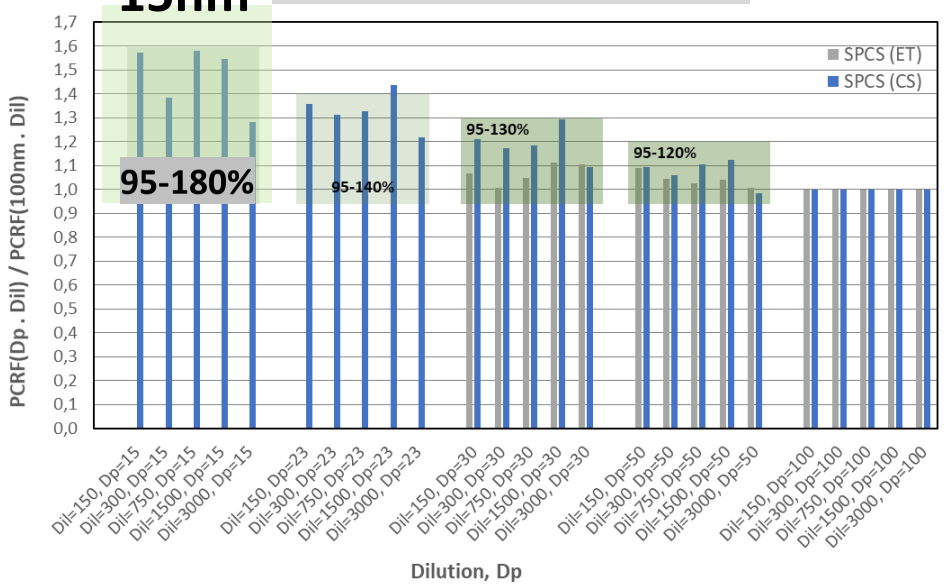
PCRF evaluation at 10nm SPCS (with CS)

NaCl vs. miniCAST soot

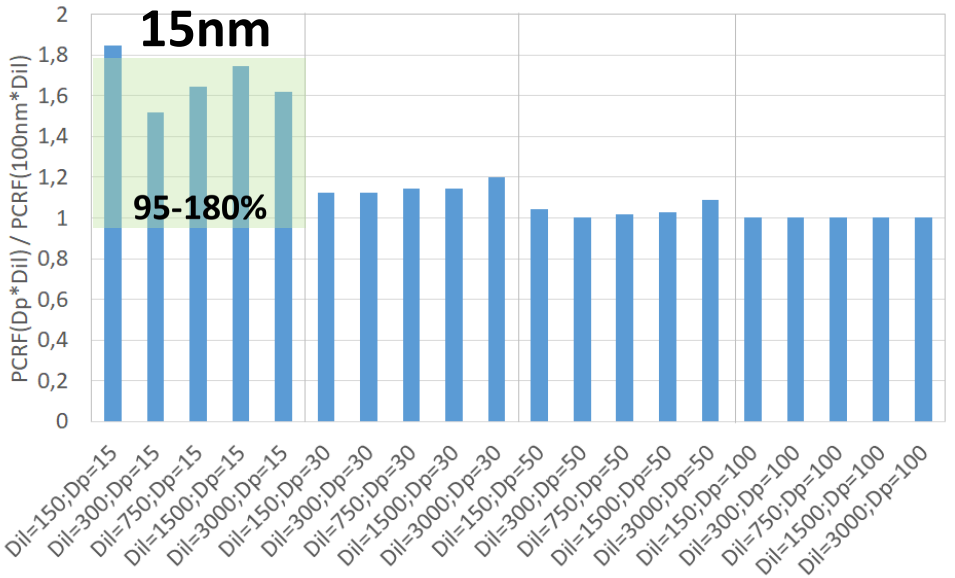
Current Discussion about PCRF at 15nm / 100nm ≤ 1,8

- Inside PEMs4Nano: With NaCl, PCRF 15nm/100nm has been evaluated and stays well below 1,8 and even below 1,6
- Outside PEMs4Nano: With miniCAST soot, at 4 out of 5 dilution stages, PCRF 15/100 of 1,8 has been achieved

NaCl from PEMs4Nano



miniCAST soot from HORIBA data



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Thank you

Cảm ơn

감사합니다

ありがとうございました

Dziękuję

धन्यवाद

Grazie

Merci

谢谢

நன்றி

ขอบคุณครับ

Gracias

Obrigado

Σας ευχαριστούμε

Děkuji

Teşekkürler

شكرا

Tack ska ni ha

Danke

Большое спасибо

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