

AIR PURIFIERS PERFORMANCES ASSESSMENT



CHALLENGED AIR PURIFIERS

BIOZONE AIRCARE 20



DYSON

AERAMAX AM III



HYBRIDE FILTER

TEST ROOM

- ✓ 25 m²
- ✓ Standard office environment located in Bron France
- ✓ Objective was to check real efficiency in a common room





TESTED PARAMETERS

- ✓ **Particles 0,3 - 0,5 - 1,0 - 2,5 - 5,0 - 10,0 μm** AQM 7302
- ✓ **TVOC (PID Sensor 50 ppb-50ppm)** AQM 7302
- ✓ **Total Viable** EMTEK P100 Air ideal 3P Air Sampler
- ✓ **Molds** Air Ideal 3P Air Sampler



AIR IDEAL 3P



AIR QUALITY MONITOR 7302

TEST ROOM CONFIGURATION

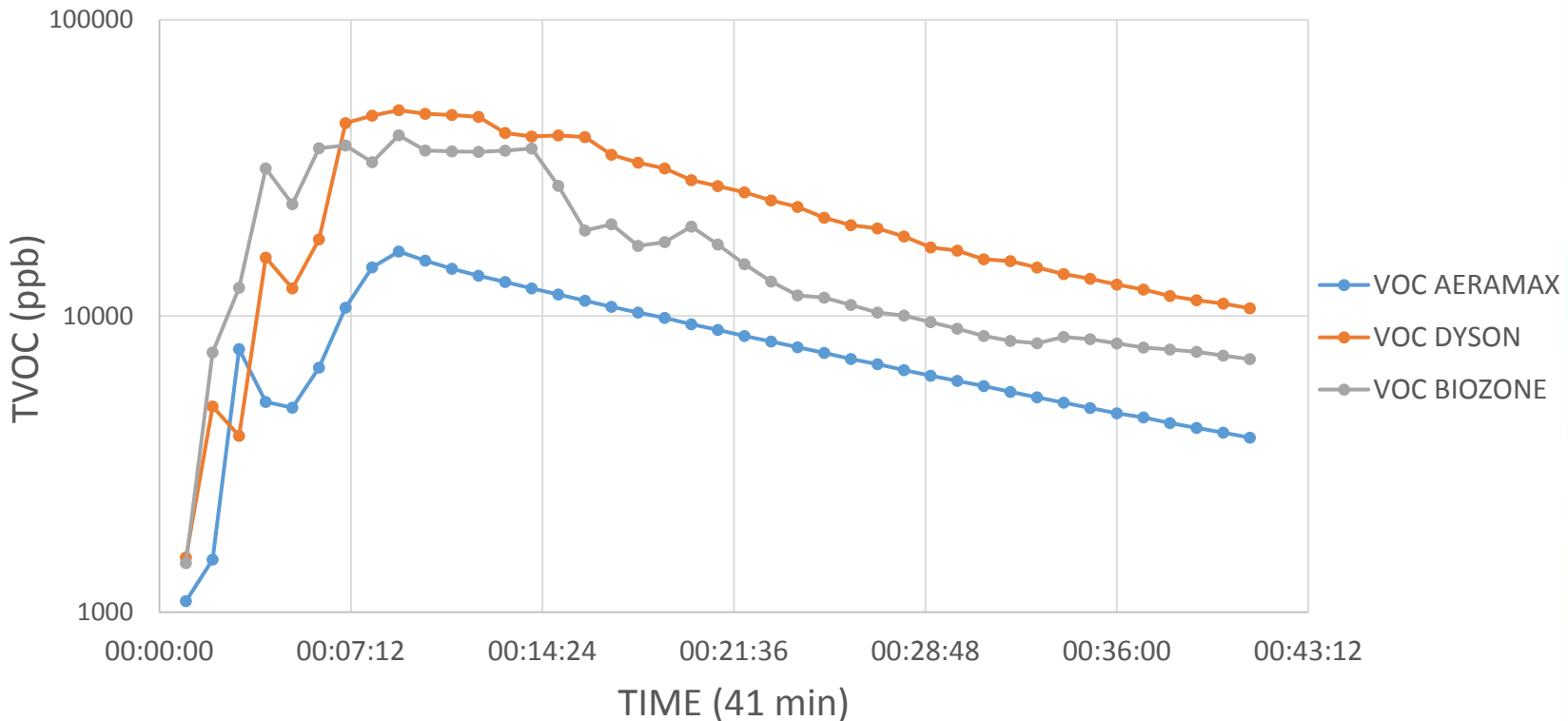
- ✓ Air purifiers action was monitored for 45 minutes
- ✓ Air sampling 100 L was done at the beginning and after 45 min
- ✓ Particles and TVOC concentration were recorded every minutes





TCOV ELIMINATION RESULTS

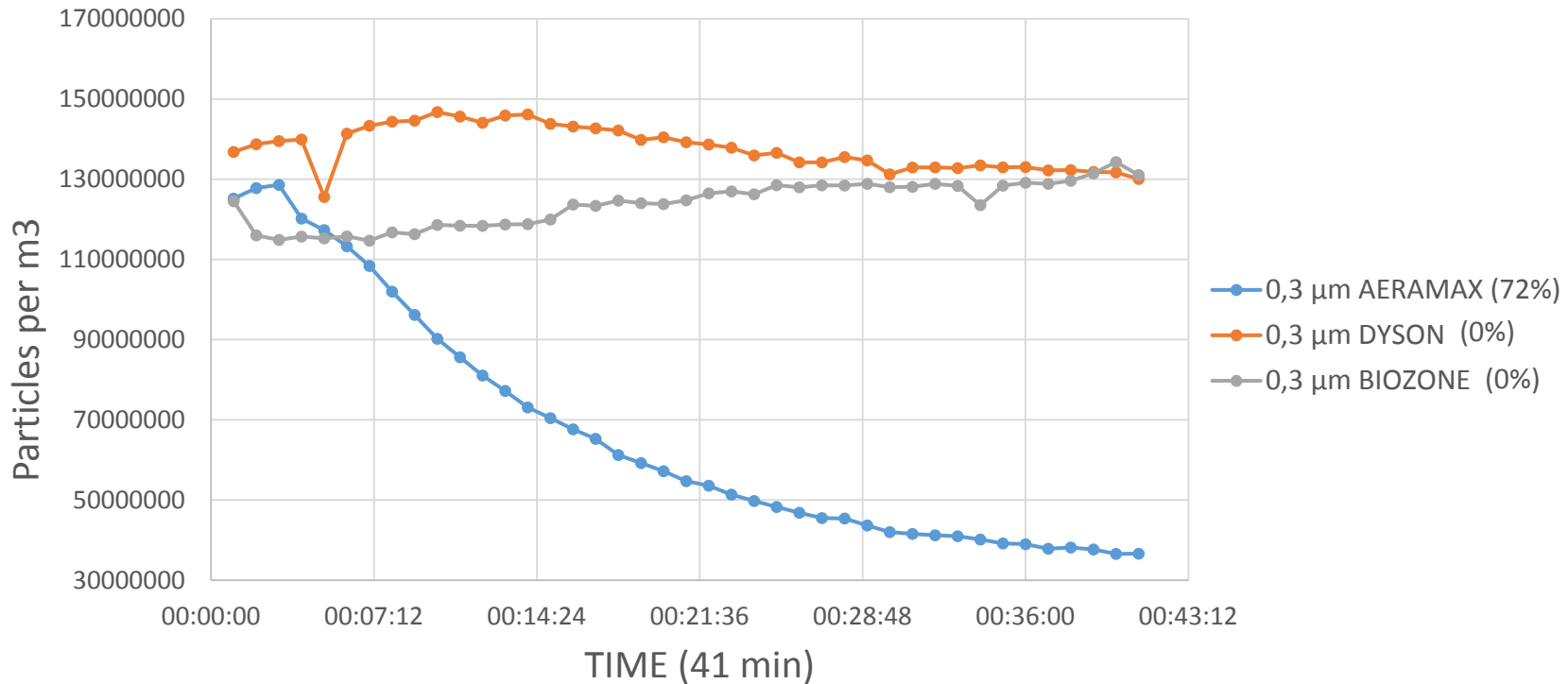
TVOC ELIMINATION COMPARISON



AERAMAX is getting most of the VOC at the beginning max 13 ppm compared to Biozone and Dyson max > 50 ppm, after 10 minutes elimination seems similar.



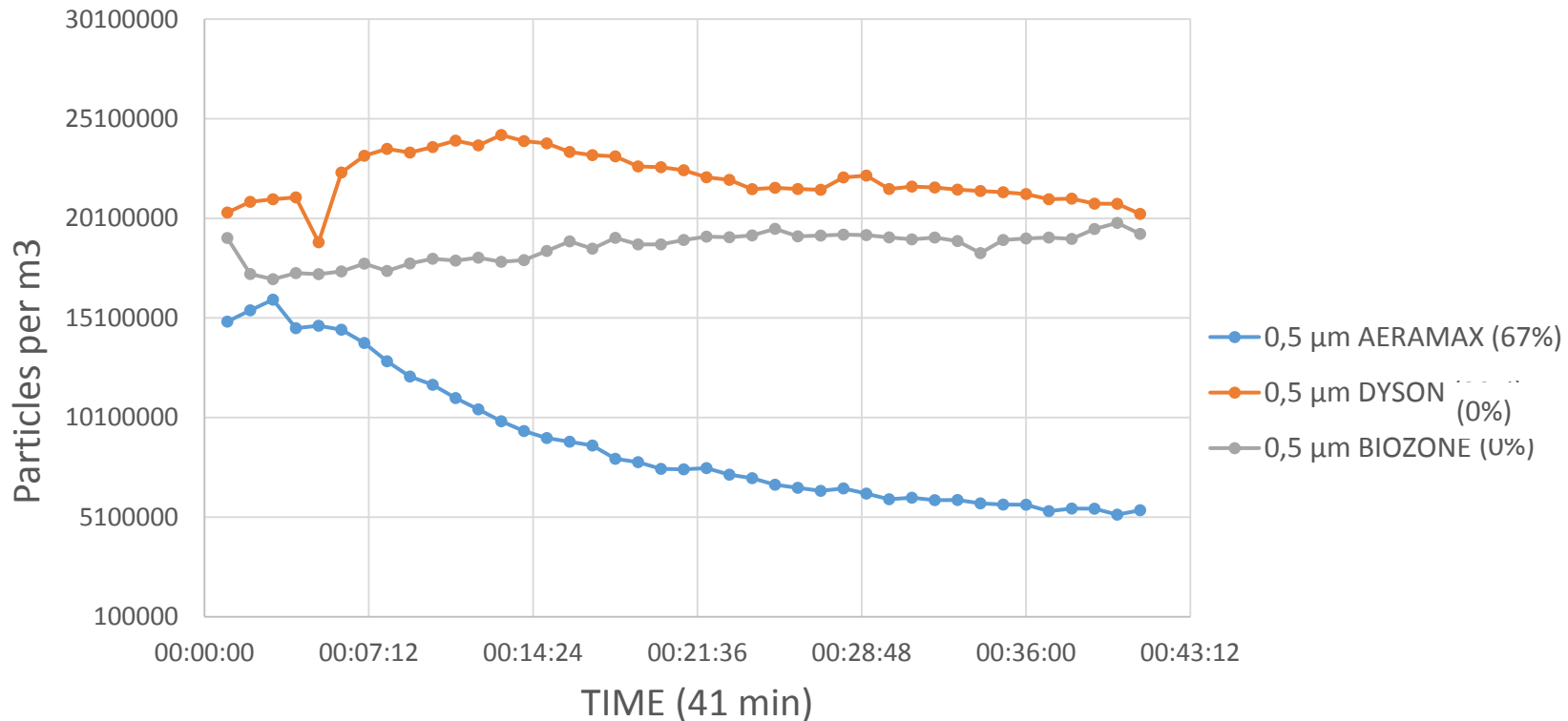
0,3 μm PARTICULES ELIMINATION RESULTS



AERAMAX is much better for small particles than DYSON and BIOZONE percentage of elimination is mentioned in brackets.



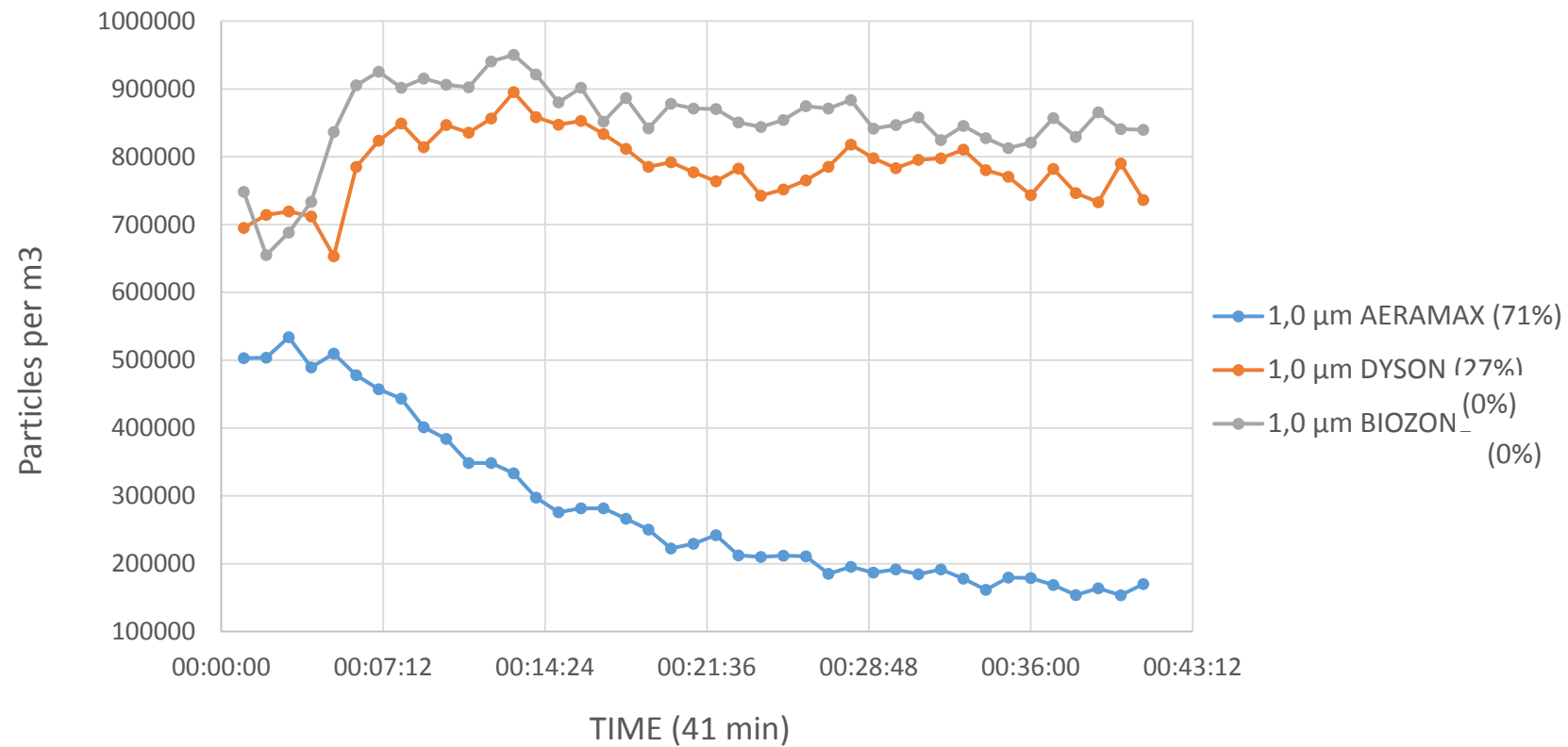
0,5 μm PARTICLES ELIMINATION RESULTS



AERAMAX is much better for small particles than DYSON, BIOZONE is the less effective. DYSON generated a lot of 0,5 μm particles the instrument was heating maybe it was related.



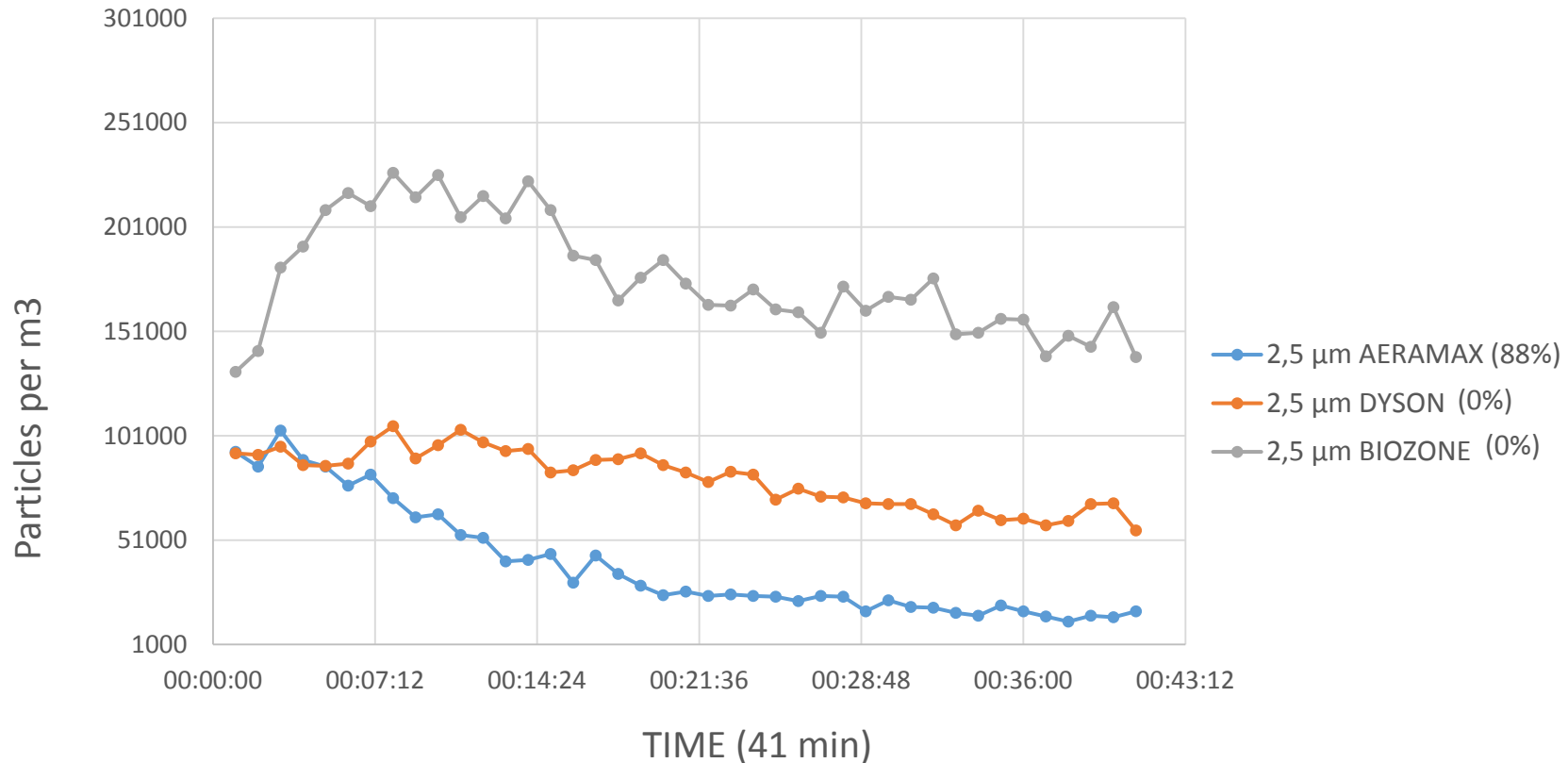
1,0 μM PARTICLES ELIMINATION RESULTS



AERAMAX is much better for 1 μm particle size. DYSON and BIOZONE seems to generate 1 μm particles.



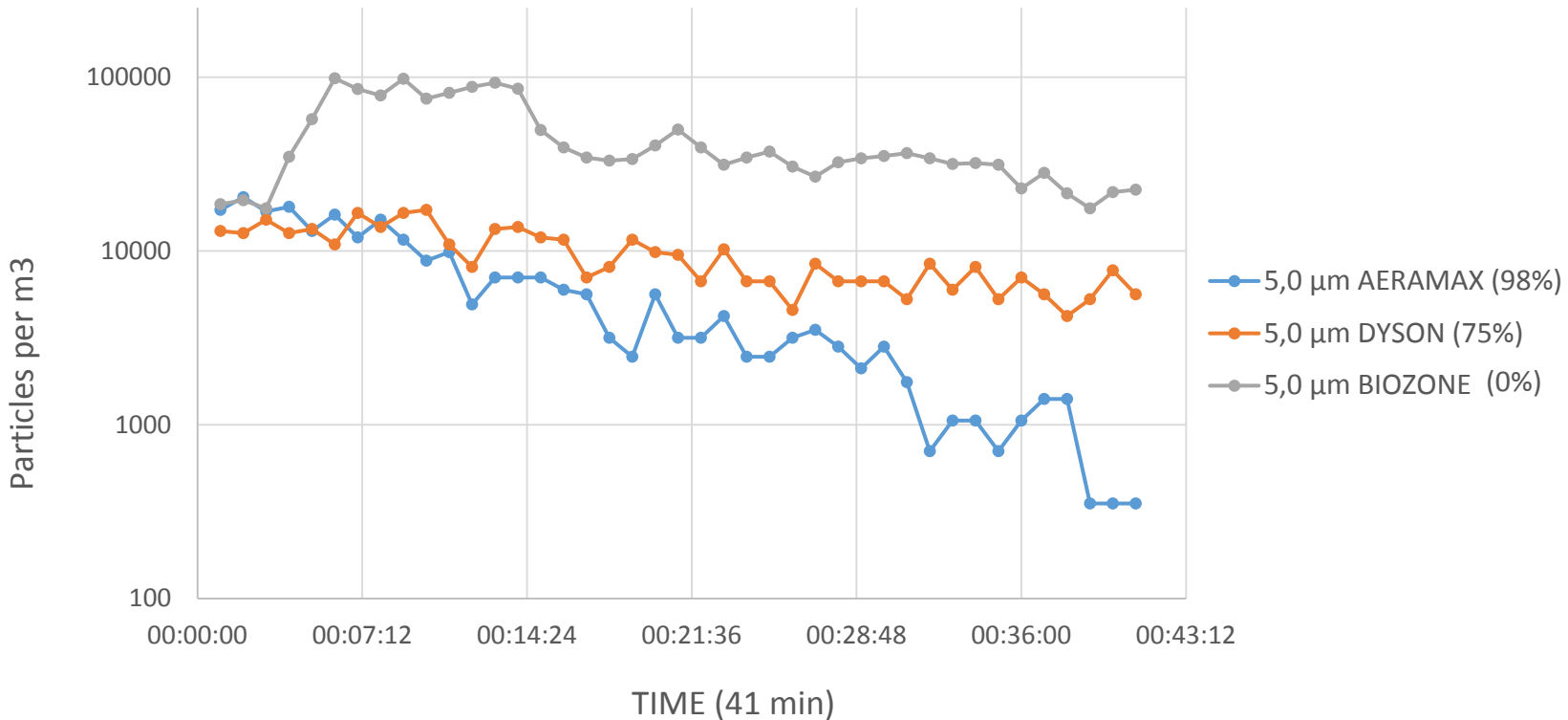
2,5 μm PARTICLES ELIMINATION RESULTS



AERAMAX is much better for 2,5 μm particle size. BIOZONE seems to generate 2,5 μm particles.



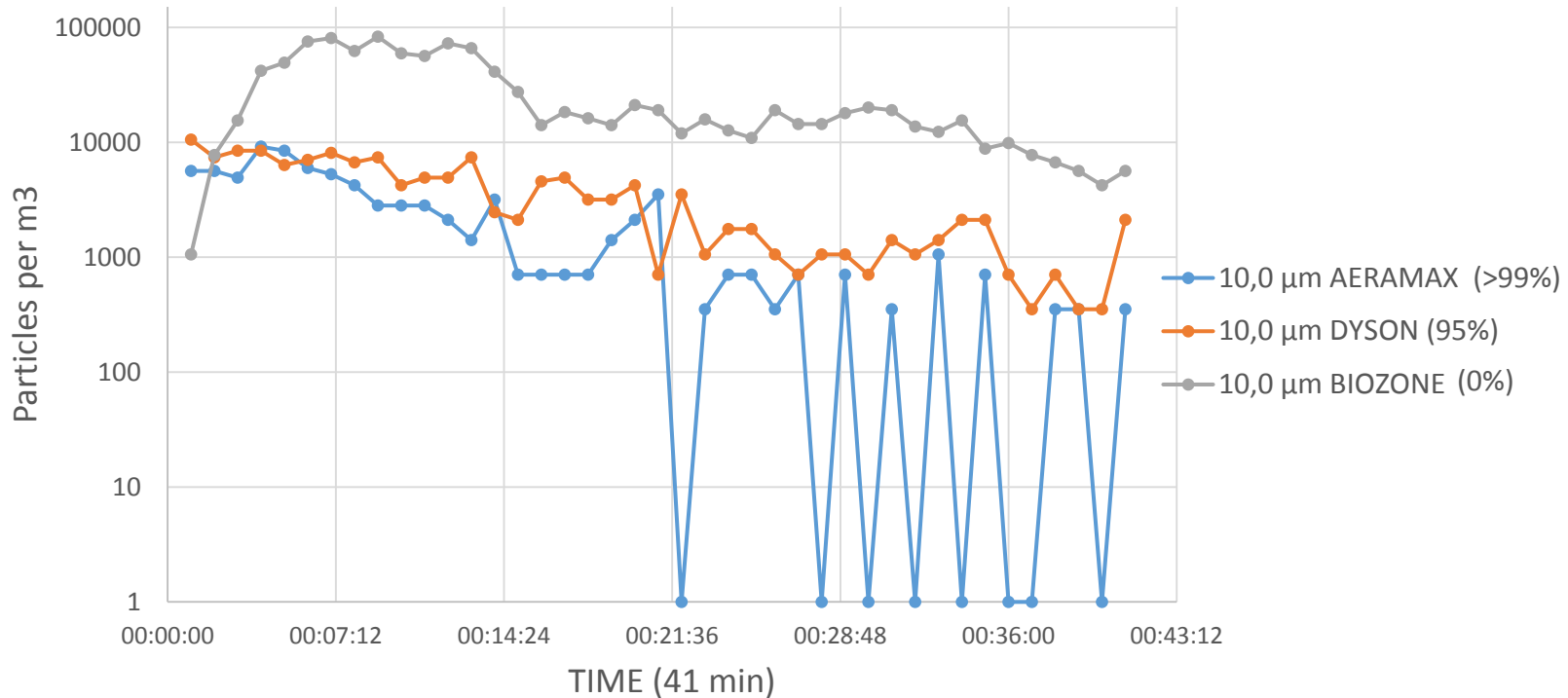
5,0 μm PARTICLES ELIMINATION RESULTS



AERAMAX is also outperforming DYSON and BIOZONE for 5,0 μm Particles. BIOZONE seems to generate 5,0 μm particles.



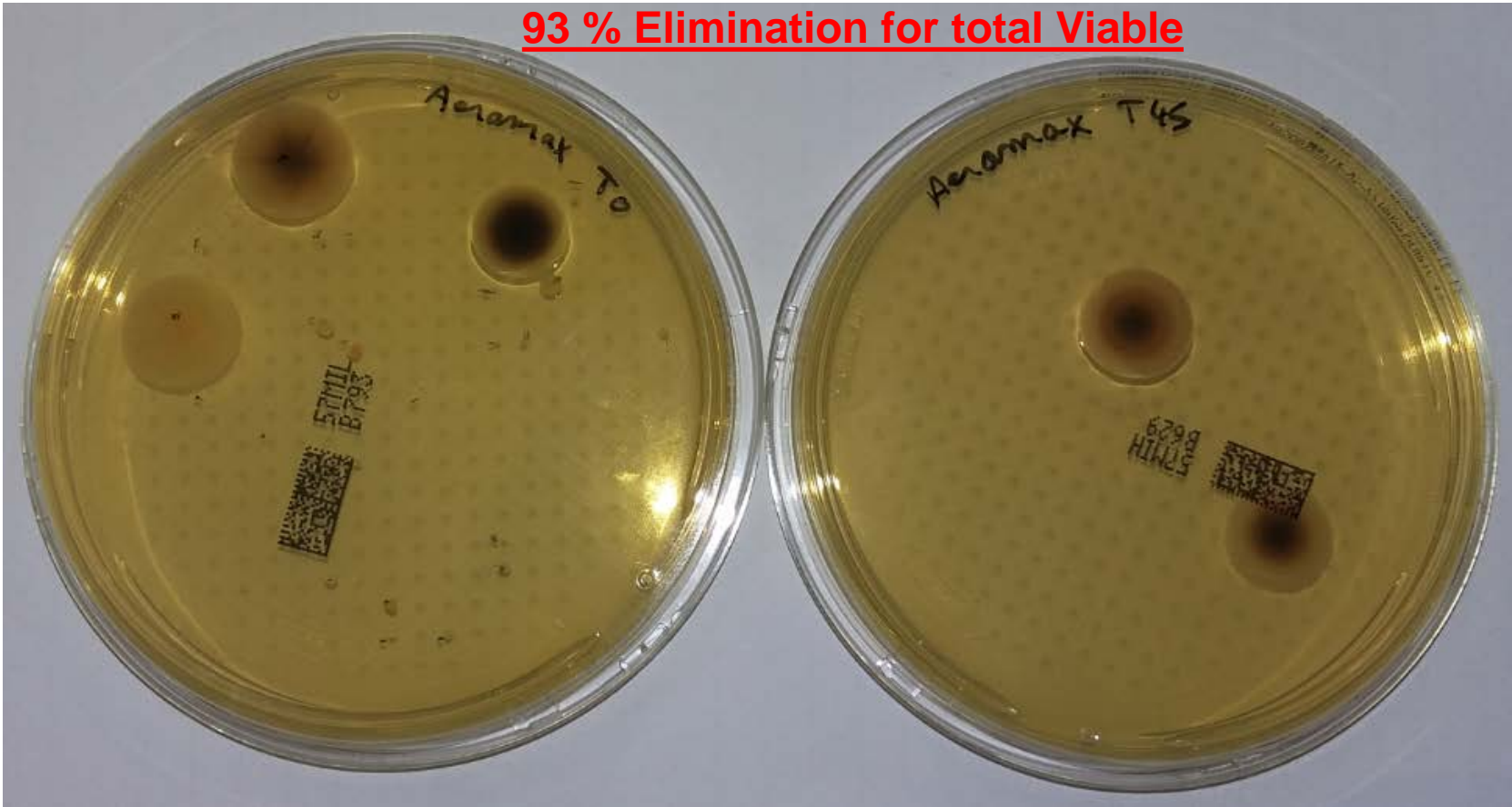
10,0 μm PARTICULES ELIMINATION RESULTS



For big particles AERAMAX and DYSON are effective BIOZONE seems to generate 10 μm particles.

AERAMAX MICROBIOLOGY ELIMINATION RESULTS

93 % Elimination for total Viable

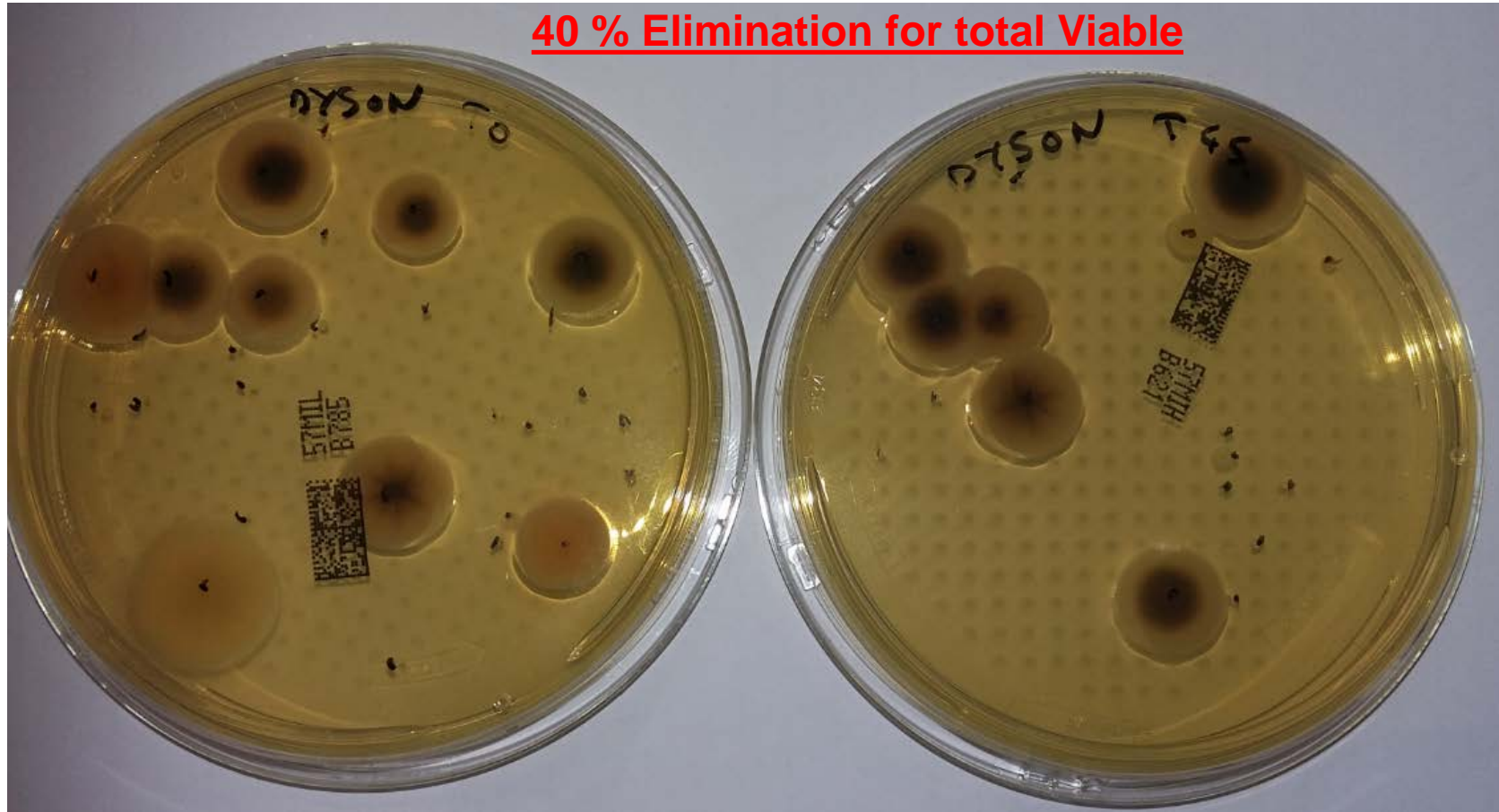


T0 : 100 L sampled
TOTAL VIABLE : 290 CFU/m³
MOLDS : 30 CFU/m³

T45 min : 100 L sampled
TOTAL VIABLE : 20 CFU/m³
MOLDS : 20 CFU/m³

DYSON MICROBIOLOGY ELIMINATION RESULTS

40 % Elimination for total Viable



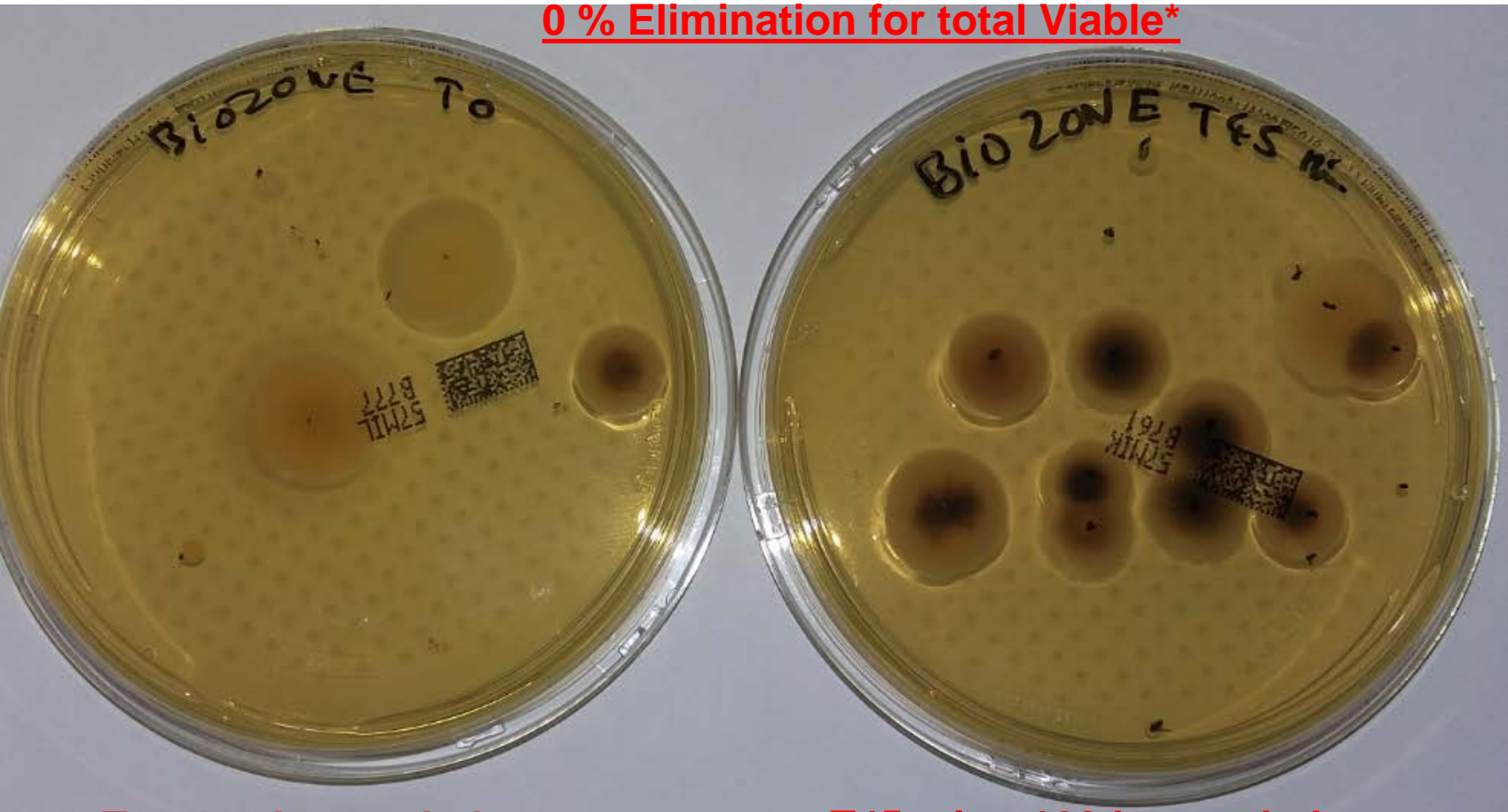
T0 : 100 L sampled
TOTAL VIABLE : 270 CFU/m³
MOLDS : 90 CFU/m³

T45 min : 100 L sampled
TOTAL VIABLE : 160 CFU/m³
MOLDS : 60 CFU/m³



BIOZONE MICROBIOLOGY ELIMINATION RESULTS

0 % Elimination for total Viable*



T0 : 100 L sampled
TOTAL VIABLE : 100 CFU/m3
MOLDS : 40 CFU/m3

T45 min : 100 L sampled
TOTAL VIABLE : 160 CFU/m3
MOLDS : 100 CFU/m3

* Test started a bit too fast after the Dyson test so room was a bit too clean at the beginning