

Correction

Correction: Meyer-Plath et al. A Practicable Measurement Strategy for Compliance Checking Number Concentrations of Airborne Nano- and Microscale Fibers. *Atmosphere* 2020, 11, 1254

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The authors wish to make the following corrections to this paper [1]:

1. We missed noticing a flaw in Table 4 that resulted from an incorrect input value (25 nm instead of 20 nm) in the second row. Please replace:

Table 4. Number of pixels and images to acquire for analyzing 0.5 mm² or 0.5 mm²/5 = 0.1 mm² filter area. Image numbers of currently hardly or not yet manageable workload are marked in grey.

Pixel Size s	Filter Area to Analyze: 0.5 mm ²			Filter Area to Analyze: 0.1 mm ²		
	Pixels to Acquire $P_x \cdot P_y$	Images à 1280 × 960 Pixel	Images à 5120 × 3840 Pixel	Pixels to Acquire $P_x \cdot P_y$	Images à 1280 × 960 Pixel	Images à 5120 × 3840 Pixel
100 nm	0.05×10^9	41	3	0.01×10^9	8	1
20 nm	1.3×10^9	651	41	0.16×10^9	130	8
10 nm	5.0×10^9	4069	254	1.0×10^9	814	51
8.3 nm	7.3×10^9	5907	369	1.5×10^9	1181	74
5.0 nm	20×10^9	16,276	1017	4.0×10^9	3255	203
2.5 nm	80×10^9	65,104	4069	16×10^9	13,021	814
1.0 nm	500×10^9	406,901	25,431	100×10^9	81,380	5086

Since the values resulting for the pixel size of 20 nm are of special relevance throughout the paper, we would like to correct them as follows.

Table 4. Number of pixels and images to acquire for analyzing 0.5 mm² or 0.5 mm²/5 = 0.1 mm² filter area. Image numbers of currently hardly or not yet manageable workloads are marked in grey.

Pixel Size s	Filter Area to Analyze: 0.5 mm ²			Filter Area to Analyze: 0.1 mm ²		
	Pixels to Acquire $P_x \cdot P_y$	Images à 1280 × 960 Pixel	Images à 5120 × 3840 Pixel	Pixels to Acquire $P_x \cdot P_y$	Images à 1280 × 960 Pixel	Images à 5120 × 3840 Pixel
100 nm	0.05×10^9	41	3	0.01×10^9	8	1
20 nm	1.3×10^9	1017	64	0.25×10^9	203	13
10 nm	5.0×10^9	4069	254	1.0×10^9	814	51
8.3 nm	7.3×10^9	5907	369	1.5×10^9	1181	74
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2.5 nm	80×10^9	65,104	4069	16×10^9	13,021	814
1.0 nm	500×10^9	406,901	25,431	100×10^9	81,380	5086



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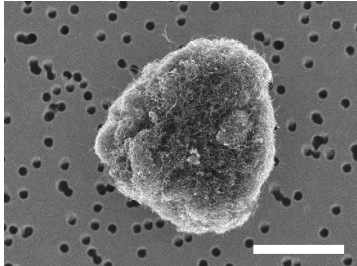
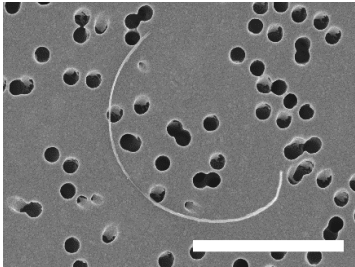
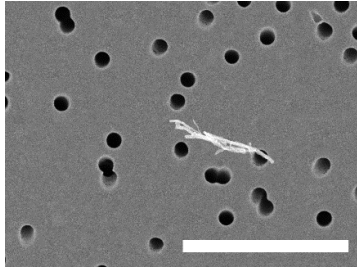
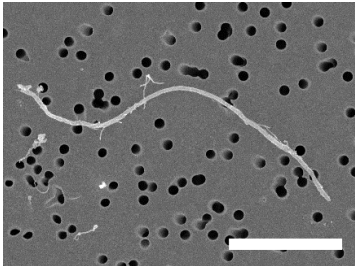
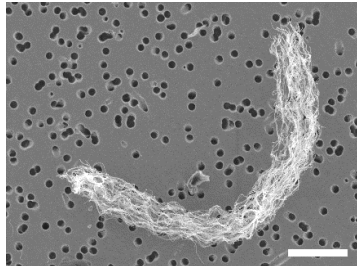
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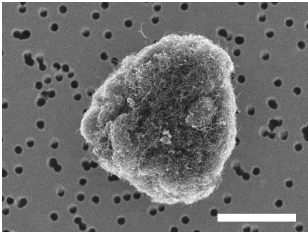
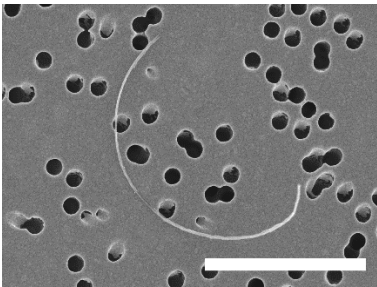
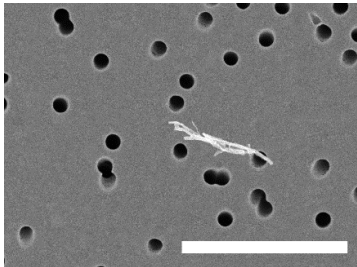
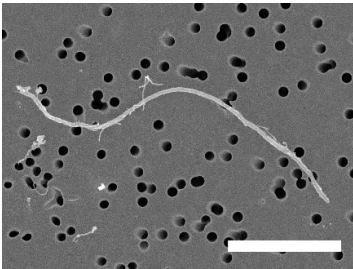
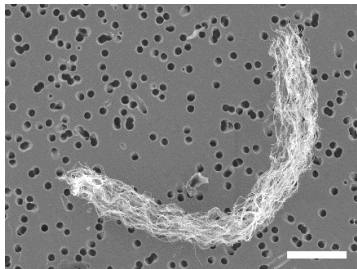
2. The horizontal separators of Table 5 before and after “Objects to Be Counted as WHO-Analogue Fibers” were removed. This disimproves the readability of the table since this text is a header for the second part of the table, as is the text “Objects Not to Be Counted as WHO-Analogue Fibers” is a header for the first part of the table. A suggestion for the new layout with two additional horizontal lines is shown subsequently. Please replace:

Table 5. Categories for categorizing respirable particles according to morphology, exemplified by example images. The length of the scale bar is 2 μm .

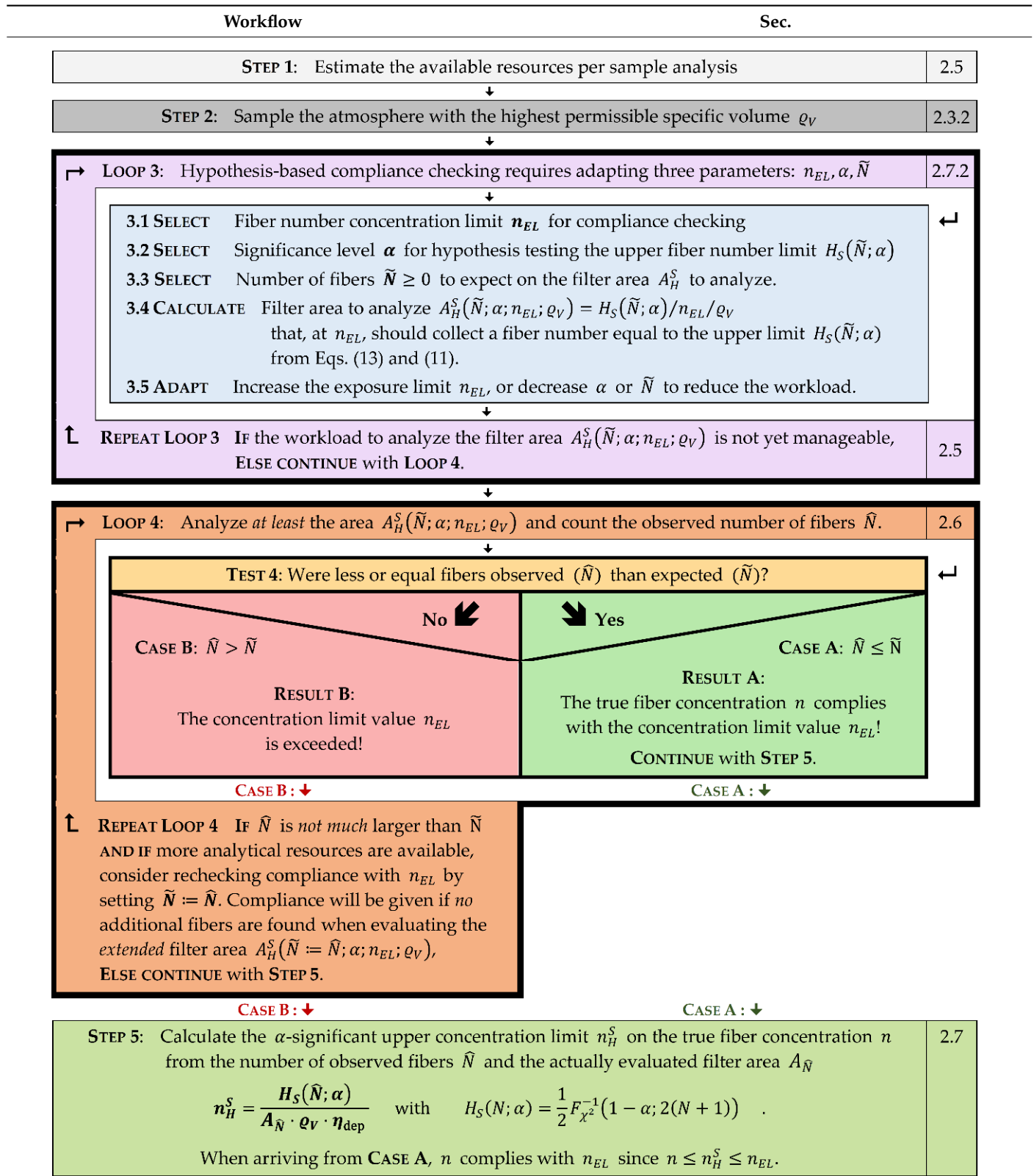
Objects Not to Be Counted as WHO-Analogue Fibers	
	
Not fiber-shaped agglomerates with $L/D < 3$	
	
Short individual fibers with $L < 5 \mu\text{m}$ and $L/D > 3$	Short fiber-shaped agglomerates with $L < 5 \mu\text{m}$ and $L/D > 3$
Objects to Be Counted as WHO-Analogue Fibers	
	
Long individual fibers with $L \geq 5 \mu\text{m}$ and $D < 3 \mu\text{m}$ and $L/D > 3$	Long fiber-shaped agglomerates with and $L \geq 5 \mu\text{m}$, $D < 3 \mu\text{m}$ and $L/D > 3$

with

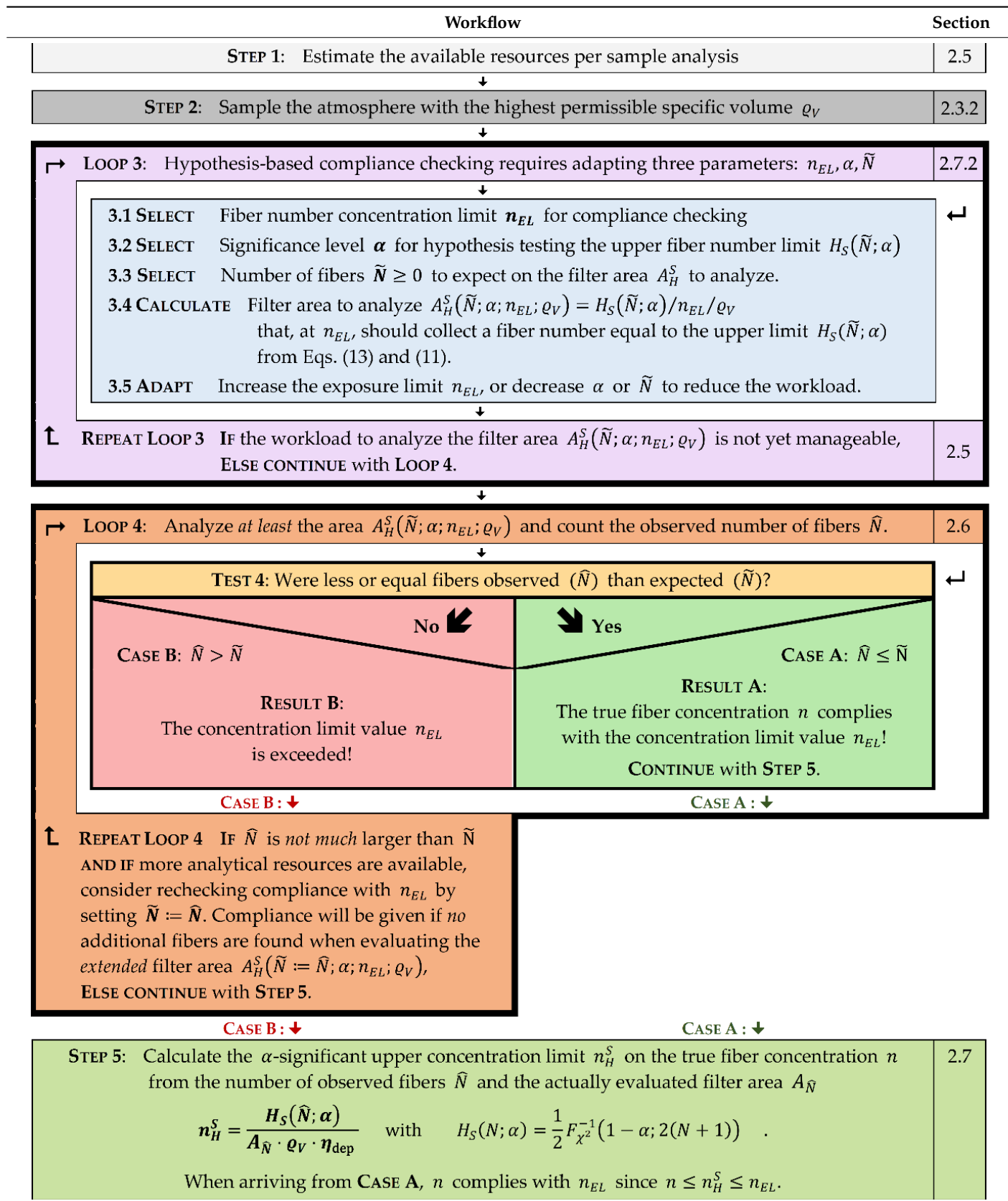
Table 5. Categories for categorizing respirable particles according to morphology, exemplified by example images. The length of the scale bar is 2 μm .

Objects Not to Be Counted as WHO-Analogue Fibers	
	
Not fiber-shaped agglomerates with $L/D < 3$	
	
Short individual fibers with $L < 5 \mu\text{m}$ and $L/D > 3$	Short fiber-shaped agglomerates with $L < 5 \mu\text{m}$ and $L/D > 3$
Objects to Be Counted as WHO-Analogue Fibers	
	
Long individual fibers with $L \geq 5 \mu\text{m}$ and $D < 3 \mu\text{m}$ and $L/D > 3$	Long fiber-shaped agglomerates with and $L \geq 5 \mu\text{m}$, $D < 3 \mu\text{m}$ and $L/D > 3$

3. In Table 11, we preferred if the header text “Workflow” was centered relative to the left column and the text “Sec.” centered relative to the right column that contains Section numbers. Please replace:

Table 11. Data evaluation workflow schematized as Nassi-Shneiderman-like diagram.

with

Table 11. Data evaluation workflow schematized as Nassi-Shneiderman-like diagram.

4. The symbol p_H^S in Equation (11) was corrupted. Please replace:

$$\alpha \stackrel{!}{\geq} p_H^S(\hat{N}) = \sum_{k=0}^{\hat{N}} \frac{\overbrace{H_S^k}^{P(k;H_S)}}{k!} e^{-H_S} \xrightarrow{\alpha=p_H^S} H_S(\hat{N};\alpha) = \frac{1}{2} F_{\chi^2}^{-1}(1-\alpha; 2(\hat{N}+1)). \quad (11)$$

with

$$\alpha \stackrel{!}{\geq} p_H^S(\hat{N}) = \sum_{k=0}^{\hat{N}} \frac{\overbrace{H_S^k}^{P(k;H_S)}}{k!} e^{-H_S} \xrightarrow{\alpha=p_H^S} H_S(\hat{N};\alpha) = \frac{1}{2} F_{\chi^2}^{-1}(1-\alpha; 2(\hat{N}+1)). \quad (11)$$

5. In Table A2, the letter “alpha” was incorrectly replaced by the letter “mu”. The symbol “alpha” stands for significance level throughout the text. The same applies to $\hat{N}$ which was replaced with (non-hat, non-italics) N. Please replace:

Table A2. Upper and lower limits of twin hypothesis testing for Frequentist (L_T and H_T) and Bayesian theorem (L_G) probability intervals as calculated from Equations (A5), (A6) and (A12) for $\hat{N}$ observed fibers and a significance level of $\mu = 5\%$. Gray areas indicate fiber counts with relatively large intervals.

Probability Interval Limits and Relative Errors for N Observed Fibers and $\mu = 5\%$ Significance										
δH_T	460%	260%	190%	130%	84%	65%	43%	32%	22%	17%
H_T	5.6	7.2	8.8	11.7	18.4	24.7	42.8	65.9	122	176
$\hat{N}$	1	2	3	5	10	15	30	50	100	150
L_T	0	0.2	0.6	1.6	4.8	8.4	20.2	37.4	81.4	127.0
δL_T	97%	88%	79%	68%	52%	44%	33%	26%	19%	15%
L_G	0.2	0.6	1.1	2.2	5.5	9.1	21.1	38.0	82.3	127.9
δL_G	76%	69%	64%	56%	45%	39%	30%	24%	18%	15%

with

Table A2. Upper and lower limits of twin hypothesis testing for Frequentist (L_T and H_T) and Bayesian theorem (L_G) probability intervals as calculated from Equations (A5), (A6) and (A12) for $\hat{N}$ observed fibers and a significance level of $\alpha = 5\%$. Gray areas indicate fiber counts with relatively large intervals.

Probability Interval Limits and Relative Errors for $\hat{N}$ Observed Fibers and $\alpha = 5\%$ Significance										
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H_T	5.6	7.2	8.8	11.7	18.4	24.7	42.8	65.9	122	176
$\hat{N}$	1	2	3	5	10	15	30	50	100	150
L_T	0	0.2	0.6	1.6	4.8	8.4	20.2	37.4	81.4	127.0
δL_T	97%	88%	79%	68%	52%	44%	33%	26%	19%	15%
L_G	0.2	0.6	1.1	2.2	5.5	9.1	21.1	38.0	82.3	127.9
δL_G	76%	69%	64%	56%	45%	39%	30%	24%	18%	15%

6. In Appendix A.3, there are two hyperlinks broken since the text of the adjacent line was not included when creating the link. They must read:
- <https://functions.wolfram.com/GammaBetaErf/InverseGammaRegularized3> (accessed on 23 December 2021)
 - <https://functions.wolfram.com/webMathematica/FunctionEvaluation.jsp?name=InverseGammaRegularized3> (accessed on 23 December 2021)

7. Equation (A7) was corrupted with respect to the exponent k , the letter $\hat{N}$, the exponent e^{-H_S} and H_S in the under-bracket. Please replace:

$$\sum_{k=0}^{\hat{N}} \overbrace{\frac{H_S^k}{k!} e^{-N_S}}^{p_H^S(N)=\alpha} + \underbrace{\int_0^{H_S} \overbrace{\frac{N^{\hat{N}}}{\hat{N}!} e^{-N}}^{G(N;\hat{N})} dN}_{CL(L_G \leq N \leq H_T | \hat{N})} = 1. \quad (A7)$$

with

$$\sum_{k=0}^{\hat{N}} \overbrace{\frac{H_S^k}{k!} e^{-H_S}}^{p_H^S(\hat{N})=\alpha} + \underbrace{\int_0^{H_S} \overbrace{\frac{N^{\hat{N}}}{\hat{N}!} e^{-N}}^{G(N;\hat{N})} dN}_{CL(0 \leq N \leq H_S | \hat{N})} = 1. \quad (A7)$$

8. Equation (A11) was corrupted with respect to the sign in e^{-H_T} and the non-capital exponent symbol k . Please replace

$$\sum_{k=0}^{\hat{N}} \overbrace{\frac{H_T^k}{k!} e^{H_T}}^{p_H^T(\hat{N})=\frac{\alpha}{2}} + \underbrace{\int_{L_G}^{H_T} \overbrace{\frac{N^{\hat{N}}}{\hat{N}!} e^{-N}}^{G(N;\hat{N})} dN}_{CL(L_G \leq N \leq H_T | \hat{N})} + \overbrace{\sum_{k=\hat{N}+1}^{\infty} \frac{L_G^k}{k!} e^{-L_G}}^{=:p_L^G(\hat{N})=\frac{\alpha}{2}} = 1 \quad (A11)$$

with

$$\sum_{k=0}^{\hat{N}} \overbrace{\frac{H_T^k}{k!} e^{-H_T}}^{p_H^T(\hat{N})=\frac{\alpha}{2}} + \underbrace{\int_{L_G}^{H_T} \overbrace{\frac{N^{\hat{N}}}{\hat{N}!} e^{-N}}^{G(N;\hat{N})} dN}_{CL(L_G \leq N \leq H_T | \hat{N})} + \overbrace{\sum_{k=\hat{N}+1}^{\infty} \frac{L_G^k}{k!} e^{-L_G}}^{=:p_L^G(\hat{N})=\frac{\alpha}{2}} = 1 \quad (A11)$$

The authors would like to apologize for any inconvenience caused to the readers by these changes.

Reference

1. Meyer-Plath, A.; Bäger, D.; Dziurawitz, N.; Perseke, D.; Simonow, B.K.; Thim, C.; Wenzlaff, D.; Plitzko, S. A Practicable Measurement Strategy for Compliance Checking Number Concentrations of Airborne Nano- and Microscale Fibers. *Atmosphere* **2020**, *11*, 1254. [[CrossRef](#)]