

# **Rubber-derived particles in size-segregated indoor air: unveiling their presence through benzothiazoles**

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## **Supplementary Materials**

### **Materials and methods – 2**

### **Figures - 2**

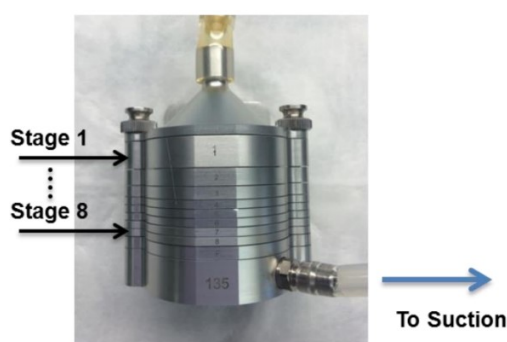
### **Tables – 3**

## Materials and methods

Ultra-grade methanol (MeOH) was purchased from VWR® (Radnor, PA, USA) and ultrapure water (18.2 MΩ-cm, 1 ppb TOC) was produced using a Purelab Ultra System (Elga®, High-Wycombe, UK). Benzothiazole (BTH), 2-amino-benzothiazole (BTH-NH<sub>2</sub>), 2-methyl-benzothiazole (BTH-Me), 2-methylthio-benzothiazole (BTH-MeS), 2-mercapto-benzothiazole (BTH-SH) were purchased from Sigma Aldrich (Darmstadt, Germany), 2-hydroxy-benzothiazole (BTH-OH) and 2-thiocyanomethylthio-benzothiazole (BTH-SCNMeS) were purchased from LCG Standards (Teddington, UK), 2-benzothiazole-sulfonic acid (BTH-SO<sub>3</sub>H) was purchased from BLD Pharm (Kaiserslautern, Germany). All used material was previously decontaminated with MeOH and ultrapure water.



**Figure S1.** Indoor sampling location. The sampling site is shown with the orange dot, the ventilation units are reported with light blue boxes.



**Figure S2.** Mini-MOUDI™ 135-6 impactor.

**Table S1.** Sample parameters.

	Volume (m <sup>3</sup> )	Sample time
13/11 – 17/11/23	11.56312	96 h 32 min
17/11 – 22/11/23	13.13001	109 h 43 min
22/11 – 30/11/23	23.56525	196 h 57 min
01/12 – 11/12/23	29.21277	244 h 9 min

**Table S2.** TSP, PM<sub>10</sub> and PM<sub>1</sub> mean concentrations.

TSP	BTH-NH <sub>2</sub>	BTH-SH	BTH	BTH-OH	BTH-Me	BTH-SCNMeS	BTH-MeS	BTH-SO <sub>3</sub> H
13 – 17/11	0.004	0.8	0.6	0.2	0.02	0.0014	0.2	1
17 – 22/11	0.005	1.1	0.8	1.0	0.03	0.0010	0.5	2
22 – 30/11	0.005	0.8	0.3	0.5	0.01	0.0010	0.3	3
01 – 11/12	0.002	0.2	0.1	0.2	0.01	0.0004	0.2	1
media	0.004	0.8	0.5	0.6	0.02	0.0010	0.3	2
DEV.ST	0.002	0.4	0.3	0.4	0.01	0.0004	0.1	1
PM <sub>10</sub>								
13 – 17/11	0.004	0.7	0.5	0.4	0.02	0.0014	0.2	1
17 – 22/11	0.004	0.8	0.4	0.8	0.03	0.0004	0.3	1
22 – 30/11	0.005	0.7	0.3	0.4	0.004	0.0010	0.3	3
01 – 11/12	0.002	0.2	0.1	0.1	0.01	0.0004	0.1	1
media	0.004	0.6	0.3	0.5	0.02	0.0008	0.2	2
DEV.ST	0.002	0.3	0.2	0.3	0.01	0.0005	0.1	1
PM <sub>1</sub>								
13 – 17/11	0.004	0.5	0.2	0.3	0.02	0.0014	0.1	1
17 – 22/11	0.004	0.5	0.2	0.7	0.02	0.0004	0.2	1
22 – 30/11	0.005	0.7	0.3	0.3	0.002	0.0010	0.2	3
01 – 11/12	0.002	0.1	0.03	0.1	0.005	0.0004	0.1	1
media	0.004	0.5	0.2	0.4	0.01	0.0008	0.2	2
DEV.ST	0.002	0.2	0.1	0.2	0.01	0.0005	0.1	1