



Supplementary Material

# Purified clinoptilolite-tuff as an efficient sorbent for gluten derived from food

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## 6. Supplementary Material

### 6.1. The Chemical Composition and Physico-Technological Parameters of PCT

**Table S1.** Summarized chemical composition and physico-technological parameters of PCT

Composition and technological parameters of PCT				References
Loss on drying [%]	0.5	to	6	inhouse data
Loss on ignition [%]	3	to	8	inhouse data
Clinoptilolite content [wt%]	75	to	85	inhouse data
Ion exchange capacity [mol/kg]	0.75	to	1.10	inhouse data
Particle size d50 [µm]	3	to	3.5	inhouse data
Porosity [%]	24	to	32	[23]
Effective pore diameter [nm]			0.4	[23]
Surface area SBET < 0.125 mm [m <sup>2</sup> g <sup>-1</sup> ]			59.2	[41]
Total dissolved solids [%]			< 0.15	inhouse data
pH-value	8	to	10	inhouse data
Al <sub>2</sub> O <sub>3</sub> [%]	9.5	to	14	inhouse data
CaO [%]	2.6	to	6	inhouse data
K <sub>2</sub> O [%]	0.4	to	1.8	inhouse data
MgO [%]	0.2	to	0.4	inhouse data
Na <sub>2</sub> O [%]	0.2	to	1.3	inhouse data
SiO <sub>2</sub> [%]	65	to	75	inhouse data
As [µg/g]	0.5	to	1.5	inhouse data
Ba [µg/g]	40	to	70	inhouse data
Cd [µg/g]			< 1	inhouse data
Mn [µg/g]	5	to	25	inhouse data
Pb [µg/g]	1	to	2	inhouse data
Bioburden [CFU/g]			< 100	inhouse data
<i>E. coli</i> in 10 g			negative	inhouse data

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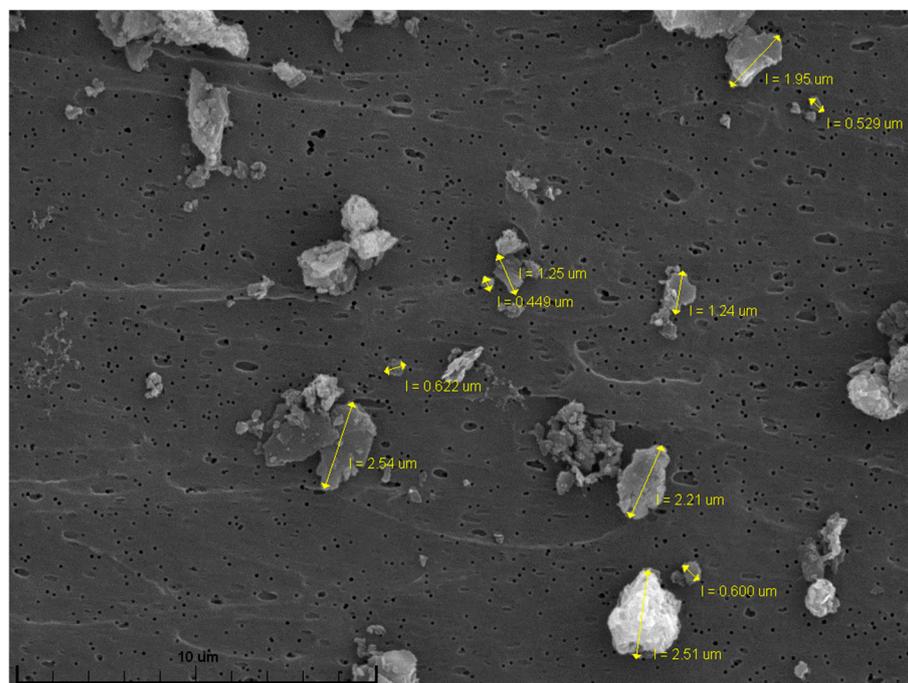
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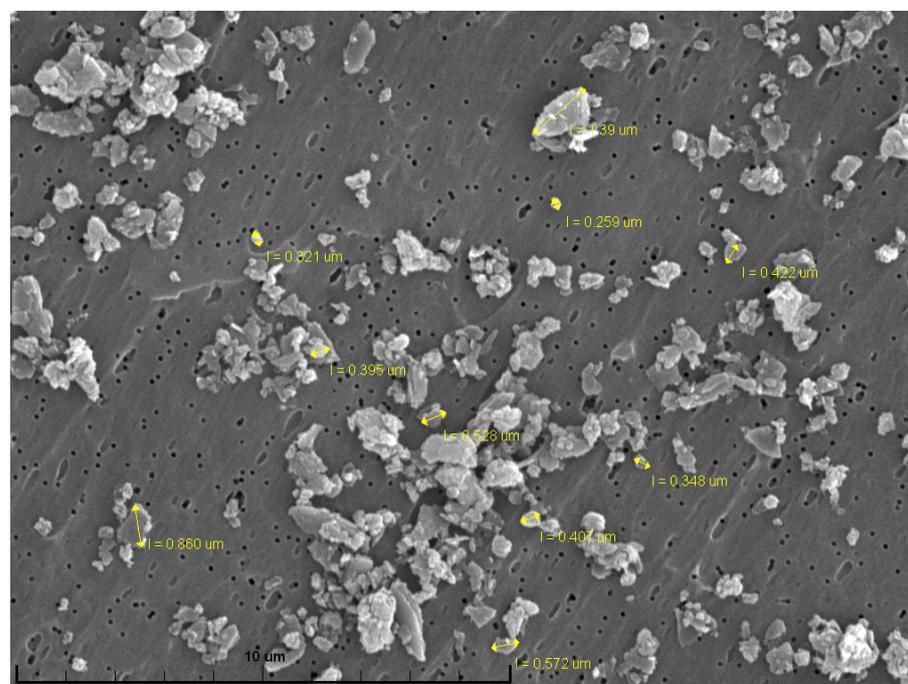
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## 6.2. Scanning Electron Microscopy (SEM) Pictures of PCT

Secondary electron detector SEM pictures were taken of 2 different PCT fractions, standard (corresponding to G-PUR®) and the fine fraction of G-PUR®, to visualize the various particle sizes (Figure S1). The particle size distributions are documented in Table 2 and Figure 6 of the main text.



(a)



(b)

**Figure S1.** Scanning electron microscopy (SEM) pictures of PCT. (a) Standard fraction; (b) fine fraction of PCT. Both illustrations contain scale and length-measurements of single particles. The pictures were taken with a Vega Tescan scanning electron microscope, settings: 15.0 kV high tension, magnification 11.30 kx for standard fraction and 15.53 kx for fine fraction.