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Analysis of surface properties of both hemp fibers and wood like fibers

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Hemp Samples

Hemp fibers (L<3 mm)

- Raw
- Heat treated

B. Chabbert, INRA

Wood like fibers

- Raw
- Enzymatic Hydrolysis
- Acid Hydrolysis (H₂SO₄) without washing
- Acid Hydrolysis (H₂SO₄) with washing
Experimental Set Up

**Sessile Drop Test**
- Measure of the dispersive component of the surface energy ($\gamma_{SD}$)
- Measure of the specific component of the surface energy ($\gamma_{Sp}^e$)

**Inverse Gaz Chromatography**
- Measure of the dispersive component of the surface energy ($\gamma_{SD}$)
- Measure of the acid and basic parameters ($K_A$ and $K_D$) of the surface
- Method very dependent on experimental conditions
- Necessity to grind the sample
- No sample preparation
- Independent of the size of the sample
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