

## S1 Fig FTIR spectra

This supporting information includes: FTIR spectra of glucuronic acid and glycerol standards (Fig A); Spectra of *M.alpina* and *M.circinelloides* biomass grown under non-lipid producing conditions (Fig B); Infrared spectra of fungal biomass before and after lipid extraction when a modified Bligh method was applied (Fig C); FTIR spectra of acid hydrolysis treatment of *M.alpina* biomass (Fig D); Different bead beating exposure times for Folch, Bligh and Lewis extraction from *M.circinelloides* biomass (Fig E).

### FTIR Spectroscopy for Evaluation and Monitoring of Lipid Extraction Efficiency for Oleaginous Fungi

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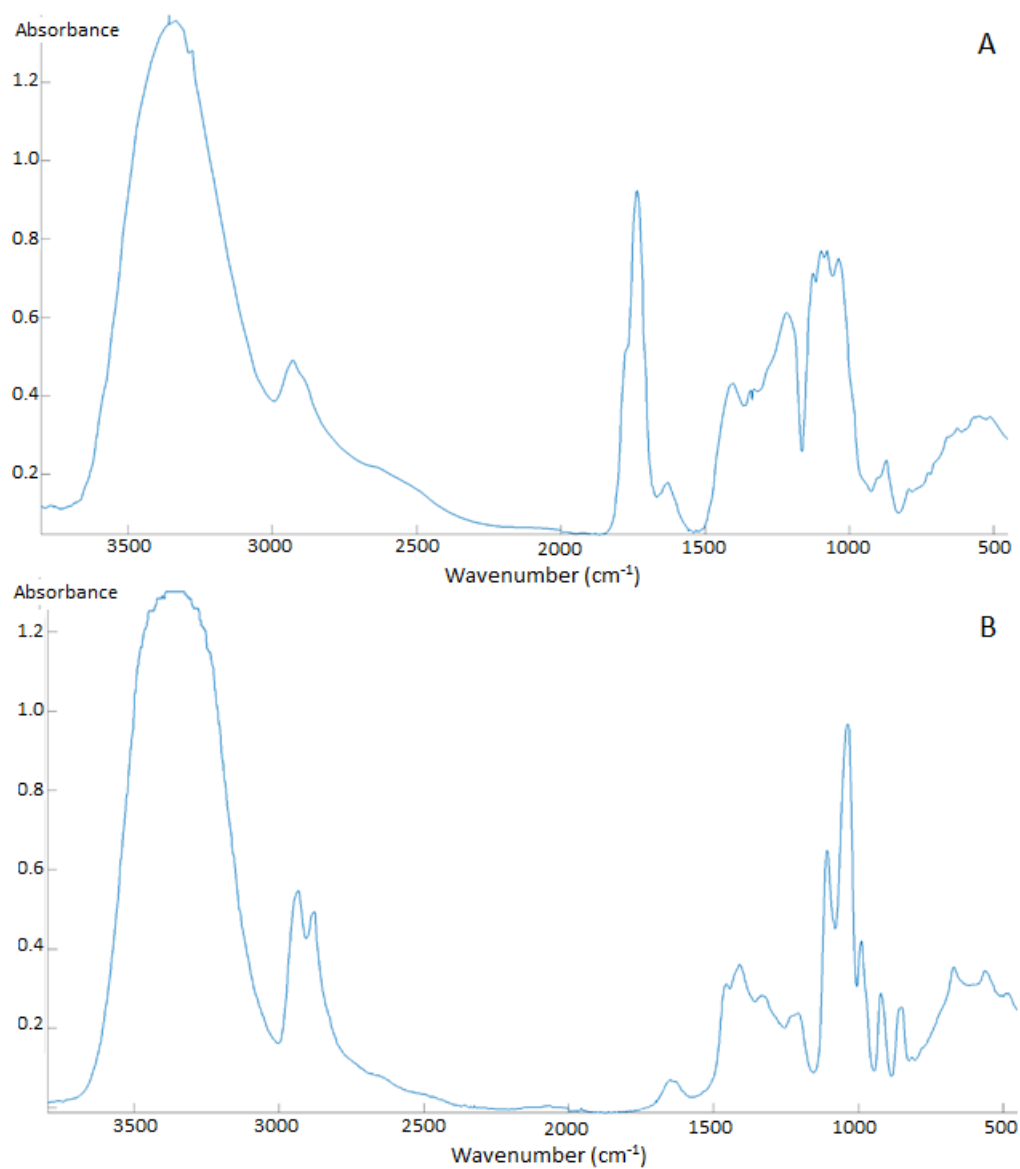
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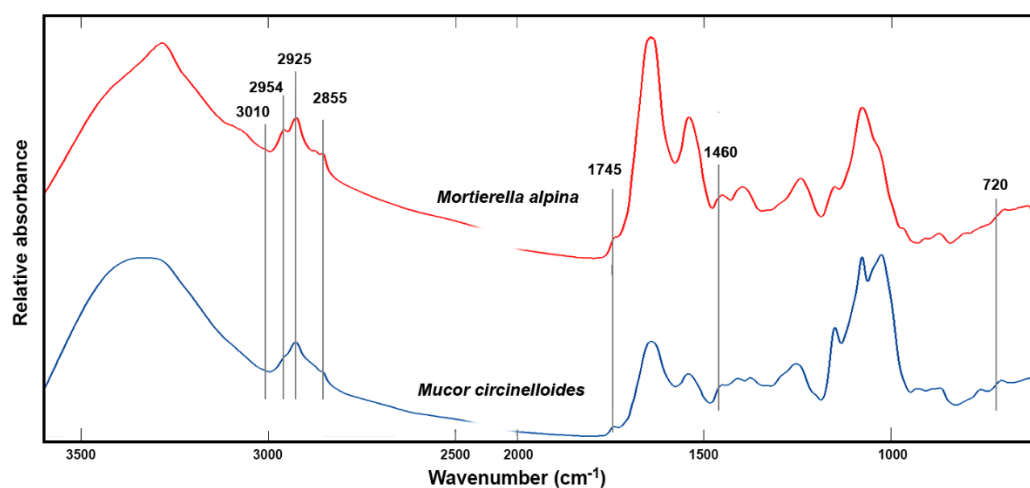
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## FTIR spectra of glucuronic acid and glycerol



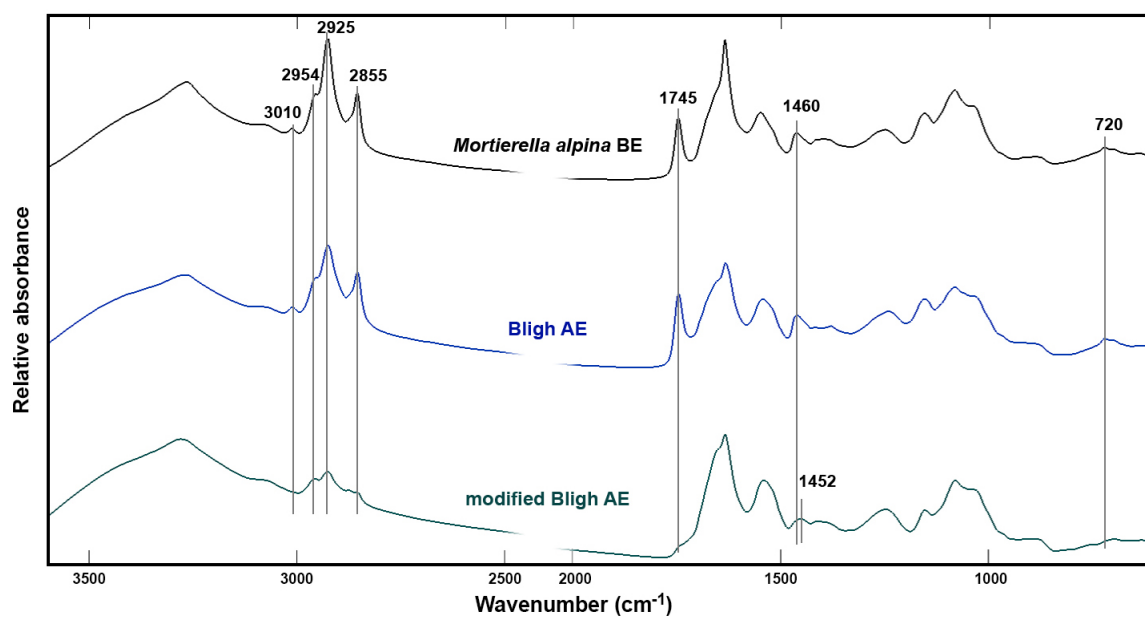
**Fig A.** FTIR spectra of glucuronic acid and glycerol. Infrared spectra were recorded of standard compounds glucuronic acid (A) and glycerol (B).

**Spectra of *M.alpina* and *M.circinelloides* biomass grown under non-lipid producing conditions**



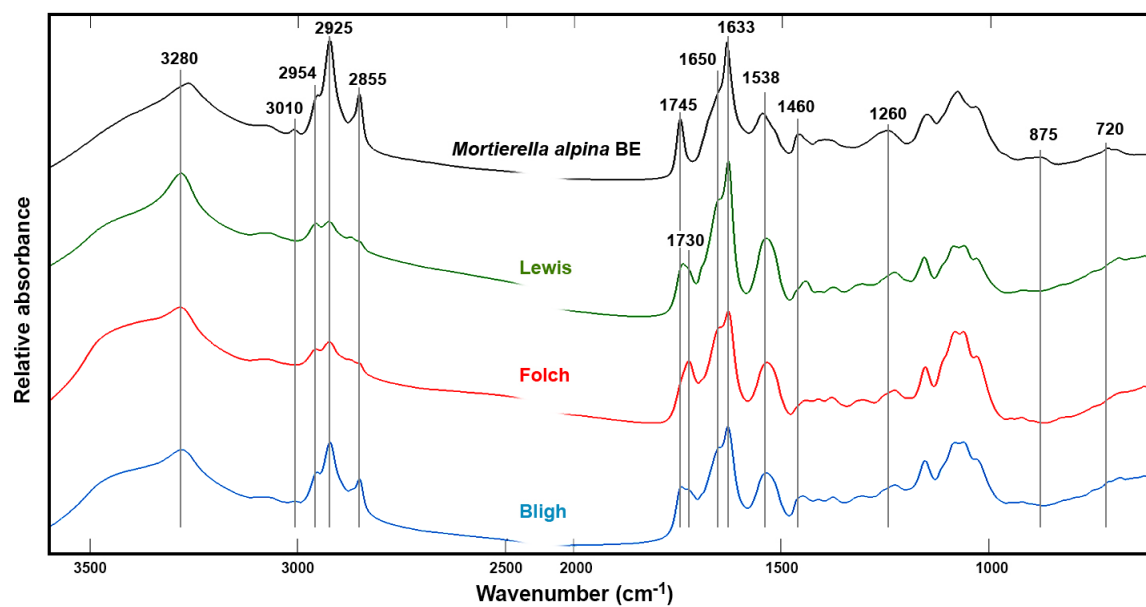
**Fig B.** Spectra of non-lipid producing fungal biomass. FTIR spectra of *Mortierella alpina* and *Mucor circinelloides* biomass grown under non-lipid producing conditions (no nitrogen limitation).

## Modification of the Bligh extraction method



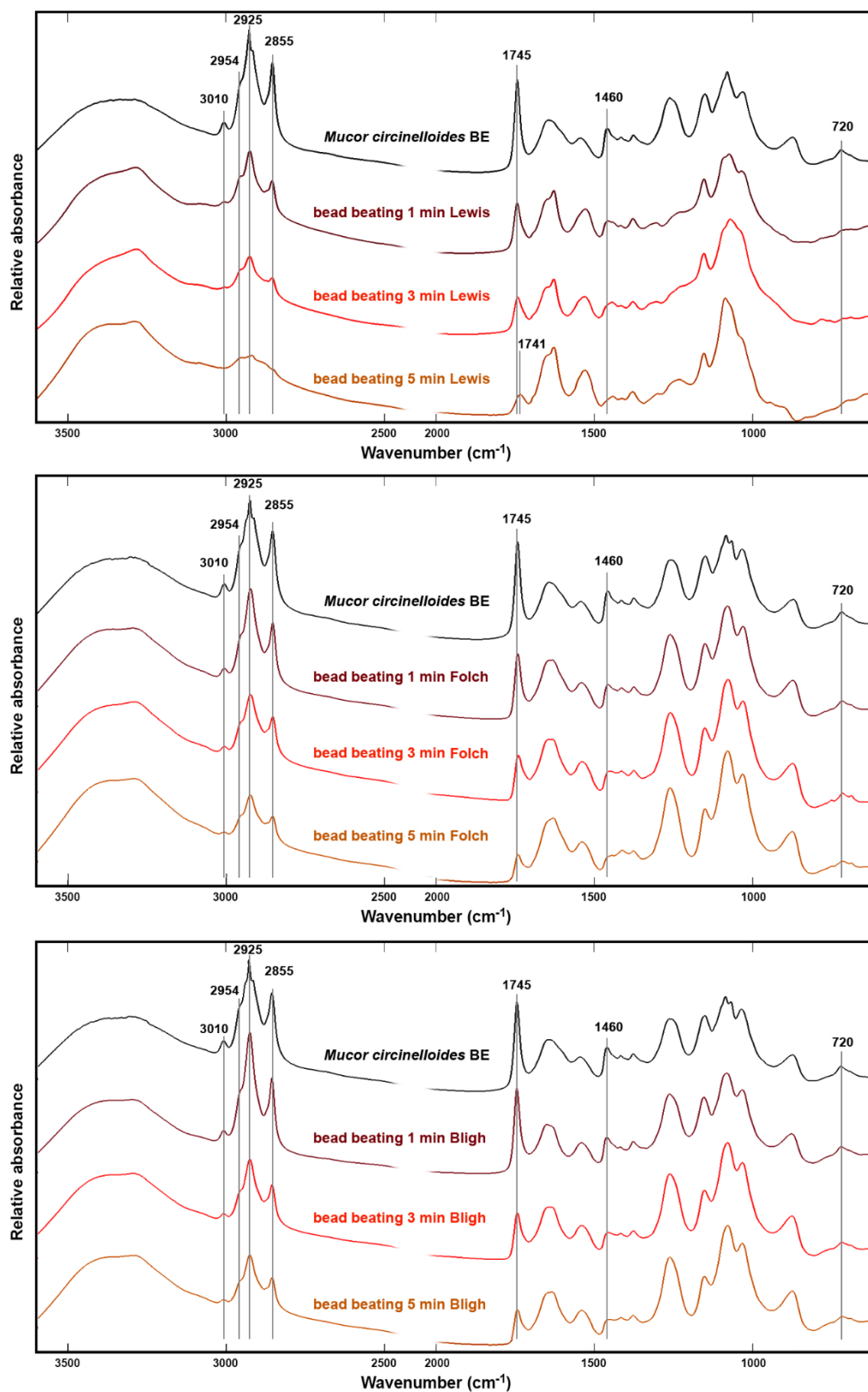
**Fig C.** Modification of the Bligh method. Infrared spectra of *Mortierella alpina* biomass were recorded before (BE) and after extraction (AE) using the original Bligh method and a modified Bligh method (Bligh 20:1). In the modified method, the initial solvent/sample ratio was increased from 3:1 to 20:1 (similar to the ratio applied in the Folch method).

## Acid hydrolysis pretreatment of *M.alpina* biomass



**Fig D.** Acid hydrolysis pretreatment of *M.alpina* biomass. Infrared spectra of *Mortierella alpina* biomass were recorded before (BE) and after acid hydrolysis pretreatment and extraction using the methods of Bligh, Folch and Lewis.

## Bead beating exposure time



**Fig E.** FTIR spectra of *M.circinelloides* biomass after bead beating exposure. *Mucor circinelloides* biomass was disrupted by bead beating for 1, 3 and 5 min and infrared spectra were recorded of the biomass before (BE) and after extraction using the Bligh, Folch and Lewis methods.