

XYLITOL FROM RICE HUSKS BY ACID HYDROLYSIS AND *Candida* YEAST FERMENTATION

Magale K. D. Rambo, Daiane B. Bevilaqua, Carla G. B. Brenner e Ayrton F. Martins*

Departamento de Química, Universidade Federal de Santa Maria, 97105-900 Santa Maria – RS, Brasil

Débora N. Mario e Sydney H. Alves

Departamento de Microbiologia, Universidade Federal de Santa Maria, 97105-900 Santa Maria – RS, Brasil

Carlos A. Mallmann

Departamento de Medicina Veterinária Preventiva, Universidade Federal de Santa Maria, 97105-900 Santa Maria – RS, Brasil

Figure 1S and 2S shows the MS² mass spectrum and the chromatograms of a standard solution of xylitol (200 µg L⁻¹) and of the fermentation hydrolysate, respectively.

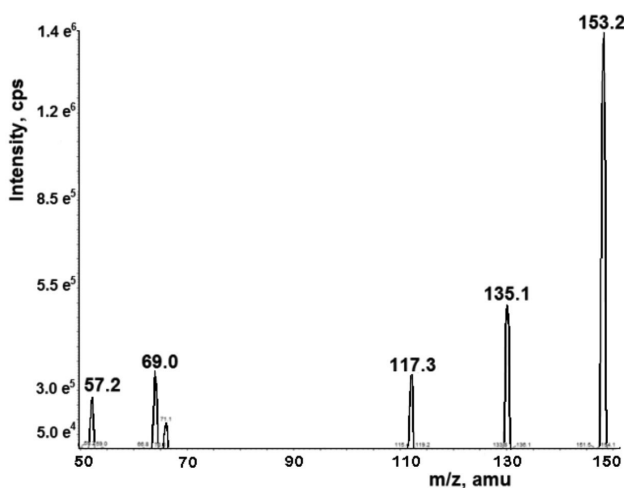


Figure 1S. MS² Scan of direct infusion of a standard solution of xylitol

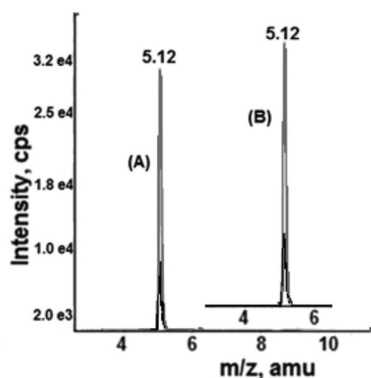


Figure 2S. Extracted ion chromatogram (XIC): (A) xylitol standard solution, (B) hydrolysate sample

Figure 3S(A) corresponds to the untreated RH and a well preserved epidermis with cellular structures covered with silica can be seen. Figure 3S(B) corresponds the RH soaked with distilled water, where no significant changes can be seen. Figure 3S(C) allows the well organized epidermis to be identified as well as the fissures resulting from the peroxide treatment. When using 10% v/v ammonium hydroxide (Figure 3S(D)) it is noticeable that the pre-treatment induced remarkable physical changes: the treated RH has a rough texture and some of the external structures are partially absent, which leads to an increase in surface area. When Figure 3S(E) is examined, it can be observed that the epidermis is slightly affected by the ultrasound treatment.

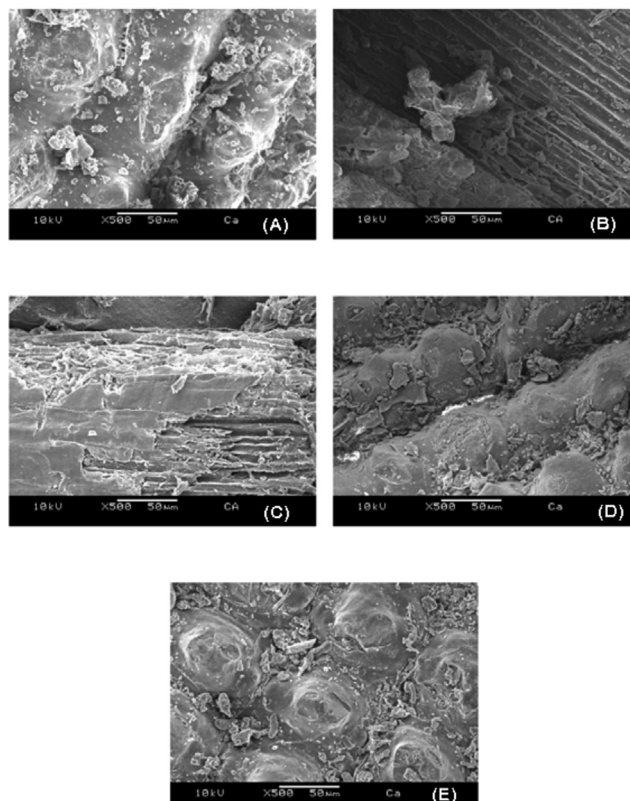


Figure 3S. Scanning electronic microscopy of rice husks submitted to different pre-treatments: (A) untreated rice husk, (B) soaked in distilled water, (C) soaked in 1% H₂O₂, (D) soaked in 10% NH₄OH and (E) sonicated