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Preparation and Differential Scanning Calorimetric Studies of a New Water-absorbing Polysaccharide from a Bacterium Belonging to the Family *Oxalobacteraceae*

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A Gram-negative bacterium, strain IM944, belonging to the family *Oxalobacteraceae* which produced a new water-absorbing polysaccharide (WAP) was isolated from soil. The water-absorbing capacity of the WAP purified by the cetyltrimethylammonium bromide treatment in a potassium hydroxide solution was 120 times as much as its own weight without stickiness. The differential scanning calorimetry (DSC) of WAP showed the reversible heat transition at a peak temperature of 60.5°C, suggesting that this polysaccharide sample is homogeneous and forms a highly ordered structure in aqueous solutions.

Key words: water-absorbing polysaccharide, new bacterium of *Oxalobacteraceae*, DSC analysis



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