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Characterization of a Novel Alginate Lyase from *Fl multivolum* K-11

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An alginate lyase was purified from an extracellular enzyme (comm
Flavobacterium multivolum K-11 by successive column chroma
cation exchange, chromatofocusing, and gel filtration. The purified
single band on SDS-PAGE and analytical isoelectric focusing. The
enzyme was 32,000 by SDS-PAGE and 33,000 by HPLC gel filtr
and the pI of the enzyme was 8.2 on isoelectric focusing. The enzyr
activity at pH 7.5 and 40°C, and was stable between pH 6.0 and

up to 20°C. The enzyme activity was remarkably inhibited by chen
SDS, MIA, TNBS, and *N*-bromosuccinimide, while EDTA and P
the enzyme activity. The enzyme decomposed both the G-block (g
89%) and the M-block (mannuronic content; 92%) at nearly equa
several kinds of unsaturated oligomers. Because such activity of alg
reported, we believe that this is a novel alginate lyase.

Keywords: alginate lyase, alginate, *Flavobacterium multivolum*

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