

Title	Characterization of a neutral polysaccharide having activity on the reticuloendothelial system from the rhizome of curcuma longa
Sub Title	
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Publisher	共立薬科大学
Publication year	1992
Jtitle	共立薬科大学研究年報 (The annual report of the Kyoritsu College of Pharmacy). No.37 (1992.) ,p.50- 50
JaLC DOI	
Abstract	
Notes	抄録
Genre	Technical Report
URL	https://koara.lib.keio.ac.jp/xoonips/modules/xoonips/detail.php?koara_id=AN00062898-00000037-0050

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**Characterization of a Neutral Polysaccharide Having Activity
on the Reticuloendothelial System from
the Rhizome of *Curcuma longa****

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A neutral polysaccharide, named ukonan D, was isolated from the rhizome of *Curcuma longa* L. It produced a single band on electrophoresis and a single peak on gel chromatography, and its molecular mass was estimated to be 28000. It showed remarkable reticuloendothelial system-potentiating activity in a carbon clearance test. Ukonan D is composed of L-arabinose : D-galactose : D-glucose : D-mannose in the molar ratio of 1 : 1 : 12 : 0.2, in addition to small amounts of peptide moiety. Methylation analysis, carbon-13 nuclear magnetic resonance and enzymic degradation studies indicated that its structural features include mainly both α -1,5-linked L-arabino- β -3,6-branched D-galactan type and α -4,6-branched D-glucan type structural units. The degradation with α -amylase followed by the elimination of glucan side chains afforded the product composed of L-arabinose : D-galactose : D-glucose : D-mannose in the molar ratio of 12 : 12 : 2 : 1. From the comparison of the phagocytosis-enhancing effects of the original polysaccharide and the degradation products, it is conceivable that arabino-3,6-galactan type structure contributes to the RES activity.

* 本報告は *Chem. Pharm. Bull.*, 40, 185—188 (1992) に発表.