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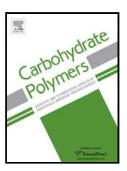
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## ACCEPTED MANUSCRIPT

1	HYDRODYNAMIC AND RHEOLOGICAL PROPERTIES OF IRVINGIA
2	GABONENSIS GUM
3	
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10	
11	Abstract
12	The polysaccharide component of Irvingia gabonensis endosperm was isolated and
13	its hydrodynamic and rheological properties investigated. The polysaccharide is an
14	arabinogalactan and contains small amounts of rhamnose, galacturonic acid, glucose
15	and glucuronic acid.
16	The polysaccharide displayed typical polyelectrolyte behaviour in solution. The
17	intrinsic viscosity at infinite ionic strength, a measure of the hydrodynamic volume of
18	the uncharged polysaccharide molecule, was obtained as 4.9 dl/g. The
19	macromolecules have a semi flexible backbone with a Smidsrod stiffness parameter
20	of 0.085. The polysaccharide exhibited non-Newtonian behaviour at all the
21	concentrations (0.2% to 3.0% (w/v)) investigated. Cox-Merz plots showed that $\eta(\ \dot{\gamma}\ )$
22	and $\eta^*(\omega)$ were closely superimposable except at low shear rates and higher
23	concentrations, where $\eta^* > \eta$ . The high Mw (1.56 x $10^6$ g/mol) and its random coil
24	conformation show Irvingia gabonensis polysaccharide has potential for application
25	as thickener.

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