

## **Rheological behaviour of high amylose and low amylose rice flour**

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Rice flour has the highest potential to be utilized in diverse food applications, but the behaviour of rice flour change due to starch characteristics. Pasting properties of high amylose (Bg 360) rice flour and low amylose (At 405) rice flour was tested in this study. Modified visco-amylograph method was used to test the pasting temperature ( $^{\circ}\text{C}$ ), time taken to reach peak viscosity (min.), peak viscosity (mPa.s), viscosity (mPa.s) at cooling to  $50^{\circ}\text{C}$  and final viscosity (mPa.s) of high and low amylose rice flours. Viscosity at different shear rate was also analyzed for both high and low amylose rice flours. Rice flour from high amylose Bg 360 rice and low amylose At 405 rice showed significant differences ( $P < 0.05$ ) in pasting properties. Pasting temperature, time taken to reach peak viscosity and final viscosity were significantly higher ( $P < 0.05$ ) in Bg 360 rice flour than At 405 rice flour. Even though, viscosity at  $50^{\circ}\text{C}$  and peak viscosity of Bg 360 rice flour were significantly lower ( $P < 0.05$ ) than At 405 rice flour. Viscosity dropped with increasing shear rate for both Bg 360 and At 405 rice flour. Fluid behaviour of both rice flour slurries followed non-Newtonian pseudo-plastic pattern. Comparatively high gelatinization temperature, time taken to reach peak viscosity and final viscosity at the room temperature were noted in high amylose Bg 360 rice flour than low amylose At 405 rice flour.

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