## 23003879 Factors Affecting Cassava Starch Quality

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Cassava starch Quality is various as it is markedly influenced by many factors including raw materials attributes, processing products and storage practices of finished products. Variation in starch quality seems to initiate in reserving roots as induced by both genetic and environmental factors. Important are variety and amount of rainfall during early plant development and immediately before root harvest. Being considered as a drought tolerant crop, however, cassava when planted and subjected to a water stress condition for the first six months produces starch of inferior quality especially the hydration properties. Extracted starch from roots of water-stressed crops has similar granule size as the mean size and distribution of the former is smaller. Further, cassava starch quality can be fluctuated depending on starch manufacturing process. Critical are sulfur water application during extraction process and conditions of drying. With the use of sulfur water, residues of sulfur dioxide (SO<sub>2</sub>) are left in starch products ( $\leq 200$  ppm), resulting in starch with increased granule stability. Starch with SO<sub>2</sub> is therefore restricted to hydration and enzymatic hydrolysis; the extent being dependent on amount of sulfur dioxide present. Modification of starch property can also occur unintentionally during drying starch cake at high temperature as a result of heat-moisture treatment which depending on the level of temperature and moisture content of starch cake. Finally, quality of cassava starch can alter during storage before distribution to customer. Clearly, paste viscosity of starch decreases; the magnitude being depending on sulfur content, the length and conditions of storage.