

## ABSTRACT

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Judul : Test characteristics starch and antioxidant activity tuber arrowroot (*Maranta arundinaceae L*) with DPPH In vitro

Arrowroot starch tuber contains high carbohydrate and bioactive phenolic compounds that work as natural antioxidants. Research on this starch test and antioxidant activity test (ethanol extract 96%) of arrowroot tubers in *vitro* and DPPH methods (2,2 - *diphenyl-1-picrylhydrazyl* ) with vitamin c as a comparator (spektrofotometer UV-Vis) has been done in purpose of knowing the characteristic starch of arrowroot tubers (qualitatively and quantitatively), the active substance content of arrowroot tubers, and determine the antioxidant activity of the 96% ethanol extract of arrowroot tubers by maceration. This research shows that starch of Arrowroot tubers shaped like single grain-slightly flattened, or multifaceted small grains. This research also show a lamella from compound grains. Starch of garut tubers have 6,4 % water content and 0,53% ash content. Active substance content test shows that arrowroot tubers have alkaloid, flavonoid, saponin, triterpenoid, and tannin. IC<sub>50</sub> value of arrowroot tuber ethanol extract is 1660 µg/ml. The results of this research showed that arrowroot tubers garut tubers have a weak antioxidant activity.

**Keywords:** Arrowroot, characteristic of starch, antioxidants, IC<sub>50</sub>.

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