



**EFFECTS OF DIFFERENT DETERGENT CONCENTRATIONS  
ON THE PHYSICAL CHARACTERISTICS OF *Brassica rapa* L.  
(PECHAY)**

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### ABSTRACT

Wastewater is sometimes disposed in the surroundings. This wastewater may contain detergents that affect the plants. This study was conducted to determine the effects of the different detergent concentration to the plants particularly *Brassica rapa* L. (Pechay.) The study used 36 seeds of *Brassica rapa* for all the treatment. The application of washing with detergent started when the trifoliolate leaves were fully exposed. Observation and measurement of the physical characteristics was done weekly for four weeks. In measuring stalk length, blade length and width of leaves, ruler was used. For measurement of stalk width, a tape measure was used.

The result of experiment indicated that sodium salt contained in the detergent might have affected the plants, hence reducing the growth rate. These can cause plant retardation due to decrease in cell turgidity, which was because of the salt properties in the detergent. It also showed that the greater the concentration, the slower the rate of elongation or development of the plant. The plant that received higher detergent concentration did not grow normally. The highest detergent concentration, 2000ppm is not considered to use as water because it damages the plant. As for lowest level of detergent concentration, it gave normal development of the plants.

**Key words:** *Brassica rapa* L. (Pechay), Detergent, Physical Characteristics, Sodium, Wastewater.



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