

**ANANAS COMOSUS ALL-IN-1 KIT**

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ABSTRACT

These days, water filtration method commonly uses chemically made substances. This could be harmful and the sources are limited. Activated carbon that is used in water filters are made from charcoal. Charcoal is non-renewable and has only a finite amount. On the other hand, the dust from chemically made activated carbon can lead to blockages. In another situation, fruits that are exposed to air will be oxidized and undergo enzymatic browning. We tend not to eat the spoiled fruit because it also will affect the taste. In conjunction to all of these problems, we have come up with an idea to produce Ananas Comosus All-in-One Kit made by pineapples. The kit contains pineapple leaf fibre paper, pineapple peel waste powder and pineapple peel activated carbon which has multipurpose function. Firstly, the pineapple leaf fibre paper can be used as a teabag to hold pineapple peel waste powder. This teabag is eco-friendly, strong and not harmful to health. Pineapple leaf fibre contains high cellulose and suitable in producing nanofiber. Its high porosity nanofiber and remarkable interconnectivity between it’s pores makes it useful in filtration process. Pineapple peel activated carbon can be a safer alternative in making activated carbon rather than using harmful charcoal. Pineapple peel waste powder can act as a substitute for antioxidants to prevent fruit browning and would not change the taste of any fruit compared to other antioxidants. All three substances can be used to make a water filter. The water filter can be constructed by flowing the water into the three layers. The main materials in this kit are made from waste products of pineapple and is completely biodegradable.