Pengembangan beeswax printing untuk fabrikasi microchannel pada filter paper = Development beeswax printing for microchannel fabrication on a filter paper

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Abstrak

Pengembangan dari teknologi 3D Printing dalam beberapa waktu belakangan ini mengalami peningkatan yang signifikan. Dimana, pengembangan dari teknologi 3D Printing memiliki kelebihan lebih efisien dan ekonomis dalam produksi prototype. Pada pengembangannya, teknologi 3D Printing digunakan dalam fabrikasi mikro. Dalam pengembangannya, teknologi 3D Printing, menggunakan filament seperti PLA (Polyactid Acid), ABS (Acrylonitrile Butadiene Styrene), dan PET (Polyethylene Trepthalate), SLA (Stereolithography), dll. Dimana, semua material yang biasanya digunakan tersebut merupakan material polymer. Sehingga, dalam penelitian ini akan dikembangkan Beeswax Printing yang menggunakan material Beeswax sebagai raw materialnya, yang akan digunakan untuk fabrikasi microchannel pada filter paper. <hr /> The development of additive manufacturing technology in recent years has increased quite rapidly. Where at the beginning the development of additive manufacturing technology its purpose to produce more efficient and economical prototyping products. In its development, the manufacturing additive technology also began to be applied to produce products on a micro scale that commonly used in tissue engineering technology. In the development of manufacturing additive technology, the raw materials most widely (as known as filaments) are PLA (Polylactic Acid), ABS (Acrylonitrile Butadiene Styrene), PET (Polyethylene Terephthalate), Thermoplastic Polyurethane, SLA (Stereolithography), etc. All of these materials are polymer materials, so we introduce 3D printers using beeswax for the development of microchannel fabrication on filter paper. However, in this research, beeswax characterization is needed, with various parameters applied in order to control the physical properties of Beeswax, so that it can be used as an alternative material to replace polymeric filaments that commonly used.