

專利/技術名稱	具有生物相容性的三維列印光固化樹脂及其製造方法 Printable biocompatible photo-curing resin and producing method thereof		
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專利國別	中華民國	專利證號	I631178
可利用範圍	提供一種具有生物相容性的三維列印光固化樹脂，		
摘要	<p>一種具有生物相容性的三維列印光固化樹脂，其包含以下質量百分比之組成：含水量介於 0~15% 質量百分比的光固化型水性聚氨酯 10~90%；丙烯酸酯共聚物 10~40%；以及光起始劑 0.1~4%；本發明將無毒、環保且具有生物相容性的光固化型水性聚氨酯作為三維列印材料，可應用於生醫或組織工程方面的產品製作，因光固化型水性聚氨酯僅以水作為溶劑，製程中不使用有害的有機溶劑；且進一步藉由製程中將水性聚氨酯去水至含水量 15% 質量百分比以下並搭配光起始劑，使本發明用於三維列印固化時，無需額外使用去水的繁瑣步驟即可直接固化，相當快速又方便。</p> <p>Present invention is related to a printable biocompatible photo-curing resin having a photo-curing water-bone polyurethane 10~90%, anacrylate copolymer 10~40% and a photoinitiator 0.1~4% being uniformly blended. The solvent of water-bone polyurethane is water which makes water-bone polyurethane a non-toxic and environmental friendly material. The present invention is suitable for biomedical or tissue engineering used and also can be produced as a biological scaffold or filler by 3D printing. The present invention is able to be cured directly during 3D printing process due to the water containing of the water-bone polyurethane is less than 15%. The present invention resolves the technical needs containing non-tooling and a small amount of customization.</p>		