

Supplementary Material

Temozolomide-Loaded Solid Lipid nanoparticles@Hydrogel for Local Treatment of Tumour

Weiwei Ji^A and Zhilan Liu^{A,B}

^AKey Laboratory of Biomedical Polymers of the Ministry of Education and College of Chemistry and Molecular Sciences, Wuhan University, Wuhan 430072, China.

^BCorresponding author. Email: liuzl@whu.edu.cn

1. Establishment of standard curve

The content of TMZ was determined by using the Lambda Bio 40 UV/VIS spectrophotometer (Perkin-Elmer). The TMZ was dissolved into PBS (10mM, pH 7.4) and placed in water bath with vibrating at 37°C overnight. The solution was scanned in the range of 200~400 nm by UV-visible spectrophotometer to determine the maximum absorption peak of the substance (Fig. S1. A).

The 10mg TMZ was accurately weighted and placed in a 100 mL volumetric flask, adding PBS (10mM, pH 7.4) to dissolve and dilute to 100 mL as the stock solution. A series of MTIC standard solutions with concentration of 1.25, 2.5, 5, 10, 15, 20 μ g/mL were prepared with PBS. The ultraviolet absorbance values of MTIC standard solutions were measured at the maximum absorption wavelength, and the standard working curve is drawn for the detection of drug content (Fig. S1. B).

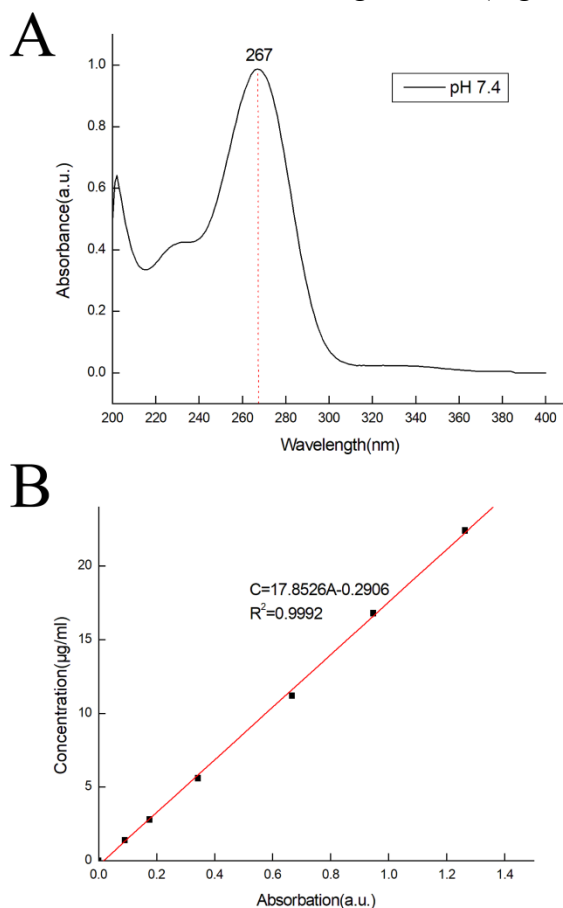


Fig. S1. (A) UV absorption spectrum of TMZ in pH 7.4; (B) standard working curve of TMZ content.

2. The XRD peak data was shown in Table S1.

Table S1. XRD peak data

Intensity 2θ (°)	TMZ	T-SLN _s	SLN _s	Mixture
10.695	267124	251892	227838	1272838
10.7104	267124	251892	227838	1272838
14.545	555479	533666	260499	1545499
14.5604	555479	533666	260499	1545499
17.856	207887	136212	189318	1154318
17.8714	207887	136212	189318	1154318
18.8186	186377	188169	267253.5	1232254
19.011	161902	187842	266763	1231763
21.4288	105830	458637	672955.5	1637956
23.1228	64891	187955	266932.5	1231933
23.9852	62644	199991	284986.5	1249987
26.326	320087	297828	101742	1256742
28.6052	289274	65408	83112	1048112
29.714	182712	68688	88032	1053032