

Preparation and characterization of a novel PMMA bone cement containing 3,4-dichloro-5-hydroxyfuran-2(5H)-one

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1. Leaching tests of PMMA cement, 10 % DHF-MAA cement and ALBC (containing 1.25 % Gentamycin Sulfate).

TABLE S1: Formulation of ALBC (percentage by mass of each component).

Formulation	Powder(%)				Liquid(%)	
	PMMA	ZrO2	BPO	Gentamycin Sulfate	MMA	DMPT
ALBC	53.07	9.51	0.45	0.77	35.43	0.77

2. Leaching tests of PMMA cement, 10 % DHF-MAA cement and ALBC (containing 1.25 % Gentamycin Sulfate).

TABLE S2: Colony Counts for NS group, PMMA cement group, 10 % DHF-MAA cement group, and ALBC (containing 1.25 % Gentamycin Sulfate) group (* indicates a significant difference compared to the NS group).

Group	Colony count
NS	294.2 ± 20.9
PMMA cement	254.8 ± 32.6
10 % DHF-MAA cement	263.2 ± 43.0
ALBC	3.8 ± 3.2 *

3. Setting time of cement

TABLE S3: Maximum temperature and setting time of cements.(* indicates a significant difference compared to the PMMA cement group, ^ indicates a significant difference compared to the 2.5 % DHF-MAA cement cement group)

Group	Maximum temperature (°C)	Setting time (min)
PMMA cement	48.4 ± 0.9	14.6 ± 0.4
2.5 % DHF-MAA cement	48.1 ± 0.5	14.5 ± 0.3
5 % DHF-MAA cement	43.8 ± 0.4	15.4 ± 0.2
7.5 % DHF-MAA cement	40.0 ± 0.8	17.3 ± 0.1
10 % DHF-MAA cement	38.0 ± 0.5 *	18.3 ± 0.1 ^