

**Table S1** Crystallographic data and OH-Orientations for crystal polymorphs I-VII of GAM.

Identification code	Polymorph-I	Polymorph -II	Polymorph -III	Polymorph -IV	Polymorph -V	Polymorph -VI	Polymorph -VII
ConQuest REFCODE	KONTIQ	KONTIQ01	KONTIQ04	KONTIQ05	KONTIQ06	KONTIQ07	
Year	2000	2001	2011	2011	2013	2017	2023
Temperature (K)	293	296	100	298	123	10	100
Crystal system	Monoclinic	Monoclinic	Triclinic	Monoclinic	Monoclinic	Monoclinic	Triclinic
Space group	$P2_1/c$	$P2/n$	P-1	$P2_1/c$	$P2_1/c$	$P2_1/c$	P-1
$a$ (Å)	5.794(4)	14.150(10)	7.117(4)	9.790(7)	7.607	23.768(1)	7.1034(6)
$b$ (Å)	4.719(5)	3.622(9)	7.506(4)	3.609(3)	3.641	3.543(1)	7.4941(6)
$c$ (Å)	28.688(5)	15.028(10)	30.679(17)	21.583(16)	26.792	28.756(1)	15.556(12)
$\alpha$ (°)			86.557(7)				100.593(3)
$\beta$ (°)	95.08(3)	97.52(7)	83.814(8)	91.46(1)	98.42	112.83(1)	91.274(3)
$\gamma$ (°)			68.531(6)				111.564(3)
$V$ (Å <sup>3</sup> )	781.303	763.580	1515.909	762.325	734.131	2231.714	753.39(11)
$\frac{Z}{Z'}$	$\frac{4}{1}$	$\frac{4}{1}$	$\frac{8}{4}$	$\frac{4}{1}$	$\frac{4}{1}$	$\frac{12}{3}$	$\frac{4}{2}$
OH-Orientations	$M_1P \bar{M}_2$	$\bar{M}_1P \bar{M}_2$	$M_1P M_2$ And $M_1P \bar{M}_2$	$M_1P \bar{M}_2$	$M_1P \bar{M}_2$	$M_1P \bar{M}_2$	$M_1P M_2$ And $M_1P \bar{M}_2$