Supplementary Materials

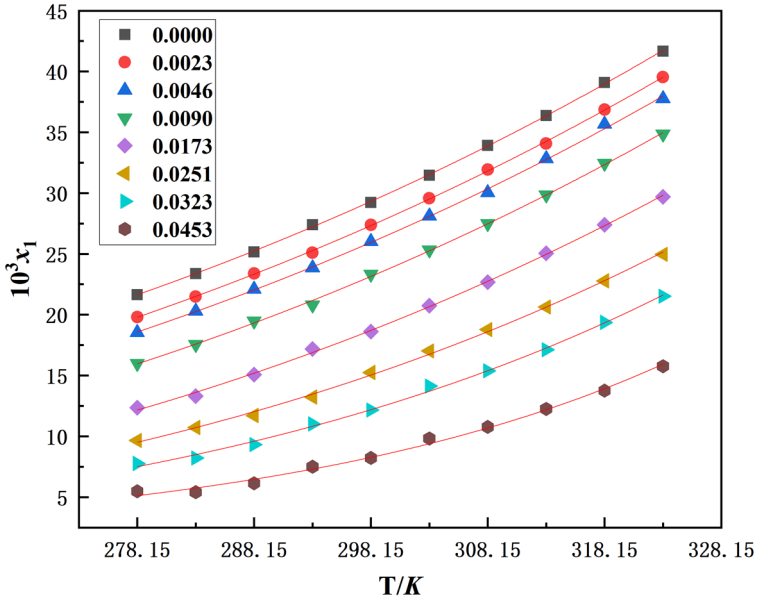

Figure S1. Mole fraction solubility of GAH in water with different HCl concentration at the temperature range of 278.15 – 323.15 K.

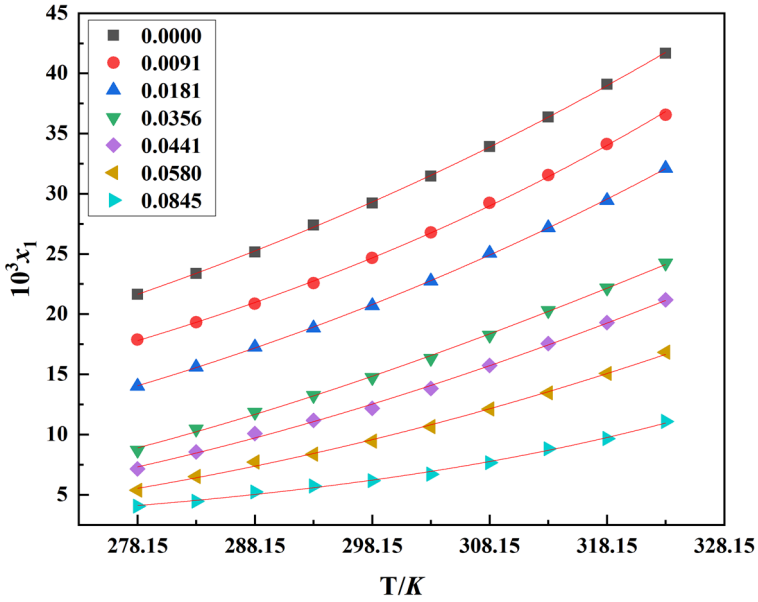

Figure S2. Mole fraction solubility of GAH in water with different NaCl concentration at the temperature range of 278.15 – 323.15 K.

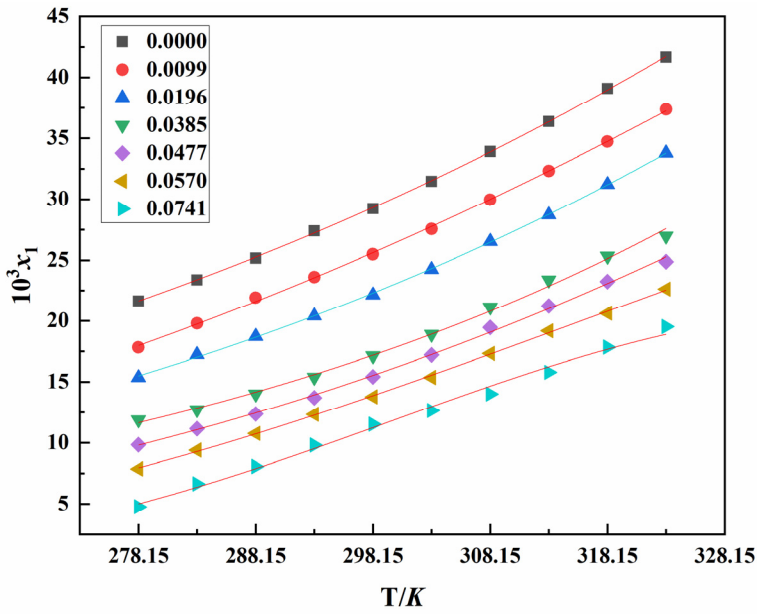

Figure S3. Mole fraction solubility of GAH in water with different KCl concentration at the temperature range of 278.15 – 323.15 K.

Table S1. The parameters of the modified Apelblat equation when HCl was used as additive.

x_{HCl}	*A*	*B*	*C*	100*ARD*	10^4*RMSD*
0.0000	-30.0501	69.4041	4.6138	0.23	0.85
0.0023	-24.0986	-259.2122	3.7504	0.24	0.93
0.0046	-24.2421	-293.7924	3.7868	0.43	1.77
0.009	-12.9616	-921.7216	2.1566	0.48	1.54
0.0173	-0.4631	-1681.3435	0.3727	0.84	1.65
0.0251	-22.4323	-836.9988	3.6932	1.10	1.92
0.0323	-56.4759	530.3146	8.8265	1.62	2.16
0.0453	-158.9760	4961.9079	24.1397	2.92	2.54

Table S2. The parameters of the modified Apelblat equation when NaCl was used as additive.

x_{NaCl}	*A*	*B*	*C*	100*ARD*	10^4*RMSD*
0.0000	-30.0501	69.4041	4.6138	0.23	0.85
0.0091	-55.4315	1076.6280	8.4454	0.42	1.45
0.0181	-11.7476	-1050.8201	2.0007	0.31	0.80

0.0356	77.9892	-5368.5393	-11.2667	0.97	1.45
0.0441	67.2600	-5004.6089	-9.6277	1.41	1.98
0.058	45.4350	-4111.9205	-6.3698	1.43	1.55
0.0845	-136.6890	4211.7183	20.6195	1.77	1.29

Table S3. The parameters of the modified Apelblat equation when KCl was used as additive.

x_{NaCl}	A	B	C	$100ARD$	10^4RMSD
0.0000	-30.0501	69.4041	4.6138	0.23	0.85
0.0099	8.2118	-1767.5067	-1.0440	0.44	1.39
0.0196	-25.6007	-349.1752	4.0313	0.41	1.04
0.0385	-60.0461	1037.9438	9.2147	1.28	3.07
0.0477	13.3251	-2389.0401	-1.6633	0.98	2.16
0.0570	135.3340	-8010.5324	-19.7880	0.73	1.17
0.0741	410.9092	-20822.6142	-60.6498	3.07	3.85

Table S4. The parameters of the van't Hoff equation when HCl was used as additive.

x_{HCl}	ΔH_d/ $J{\cdot}mol^{-1}$	ΔS_d/ $J{\cdot}mol^{-1}{\cdot}K^{-1}$	$100ARD$	10^4RMSD
0.0000	11003.7495	7.5998	0.50	1.59
0.0023	11572.6796	8.9180	0.42	1.38
0.0046	11957.8701	9.7773	0.54	2.03
0.0090	13073.4560	12.5584	0.49	1.56
0.0173	14887.4002	16.8600	0.85	1.64
0.0251	16187.9086	19.4356	1.07	1.78
0.0323	17756.6785	22.9905	1.80	2.21
0.0453	19419.6559	25.4703	3.08	2.77

Table S5. The parameters of the van't Hoff equation when NaCl was used as additive.

x_{NaCl}	ΔH_d/ $J{\cdot}mol^{-1}$	ΔS_d/ $J{\cdot}mol^{-1}{\cdot}K^{-1}$	$100ARD$	10^4RMSD
0.0000	11003.7495	7.5998	0.50	1.59

0.0091	12249.8338	10.3775	0.78	2.16
0.0181	13768.0463	13.9939	0.39	0.89
0.0356	16272.0681	19.4876	1.09	1.80
0.0441	17352.7218	21.7172	1.56	2.08
0.0580	18179.4683	22.2756	1.31	1.42
0.0845	17032.6556	15.0343	2.76	2.09

Table S6. The parameters of the van't Hoff equation when KCl was used as additive.

x_{KCl}	ΔH_d/ J·mol^{-1}	ΔS_d/ J·mol^{-1}·K^{-1}	100*ARD*	10^4*RMSD*
0.0000	11003.7495	7.5998	0.50	1.59
0.0099	12083.3649	10.0503	0.42	1.35
0.0196	13043.5207	12.1613	0.54	1.49
0.0385	14488.4090	14.8925	1.46	2.86
0.0477	15616.4573	17.7501	0.95	2.26
0.0570	16721.6747	20.3792	1.83	2.81
0.0741	20028.3202	29.4632	4.99	5.40