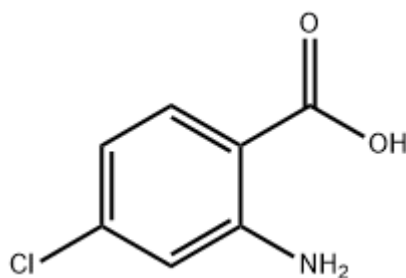


2-AMINO 4-XLORBENZOY KISLOTASINING FOYDALANISH SOHALARI HAMDA ERUVCHANLIGI HAQIDA UMUMIY MA'LUMOT

¹Choriyeva N. B., ²
Almardonova M.F.,
³Ashurova M. Sh.

^{1,2,3}Termiz davlat universiteti tayanch doktoranti

2-amino 4-xlorbenzoy kislotasi $H_2NC_6H_3(Cl)CO_2H$ formulali organik birikmadir. Benzoy kislotasi halqasidagi atomlari o'rniga xlor hamda amino guruhning joylashuvidan hosil bo'lib, kuchli kislotalik xossalari namoyon qiladi. 2-amino 4-xlorbenzoy kislotasi 4-xlorantranil kislotasi deb ham ataladi. 4-xlorantranil kislotasi 2-xloro 4-nitrobenzoy kislotasidan sintez qilinadi.



1-rasm. 2-amino 4-xlor benzoy kislotasi.

2-amino 4-xlorbenzoy kislotasi oq rangli, qattiq modda bo'lib, farmasevtik va organik sintezning oraliq mahsuloti sifatida ishlatiladi.[1] Kuchli antifungal faollikni ko'rsatadigan 4-xlorosalisil kislotasi 2-amino 4-xlorbenzoy kislotasidan olinadi. Bundan tashqari u yangi Tb 3+ kompleksi, Eu (2-amino-4-xlorbenzoy kislotasi) 3 1,10-fenantrolin va 6-xlorotiyanaften ishlab chiqarish uchun xom ashyo sifatida ishlatilishi mumkin. [2]

Taqsimlanmagan elektron juftlarga ega amino guruh hamda galogenning mavjudligi 2-amino 4-xlorbenzoy kislotaning kimyoviy faolligini oshiradi va turli birikmalar olish imkonini beradi. Hozirgi kunda 2-amino 4-xlorbenzoy kislotasini

синтез qilishning turli usullari ishlab chiqilgan. Har qanday kimyoviy birikma bilan tadqiqot ishlari olib borishda yoki tozalash, mahsuldorligini oshirishda uning fizik-kimyoviy xossalari hamda termodinamik funksiyalarining tavsifini beruvchi eruvchanligini aniqlash hisoblanadi.

Odatda erituvchining kristall holatga o'tishi ishlab chiqarish jarayonlarida maddalardan tozalash hamda ajratishda muhim bosqich hisoblanadi. Ma'lumki, kristallanish hodisasi bilan bog'liq tadqiqotlarda aniq eruvchanlik ma'lumotlarini talab qilinadi. 2-amino 4-xlorbenzoy kislotasi bilan tadqiqot olib borishda uning eruvchanligini bilish juda muhimdir.

Yuqori tozalikdagi 2-amino 4-xlor benzoy kislotasini olish uchun uni turli xil erituvchilarda turli sharoitlarda eruvchanligi va eritmaning termodinamik xususiyatlarini bilish kerak. 2-amino 4-xlorbenzoy kislotasini o'ndan ortiq organik erituvchilarda eruvchanligi o'rganilgan. Mazkur organik erituvchilar tez-tez ishlatiladigan, tannarxi qimmat bo'lmagan erituvchilar bo'lib, bular jumlasiga *N*-metil-2-pirolidon, etanol, *n*-propanol, izopropanol, etil benzol, toluol, *n*-butanol, asetonitril, etil asetat va boshqalar kiradi.[3]

2-amino 4-xlorbenzoy kislotasini tanlangan erituvchlarda eruvchanligini aniqlashdan maqsad (1) izotermik to'yinganlik usuli yordamida 2-amino-4-xlorbenzoy kislotasining tanlangan erituvchilarda eruvchanligini aniqlash; (2) eruvchanlikni turli termodinamik modellar bilan bog'lash; va (3) 2-amino-4-xlorbenzoy kislotasining turli erituvchilardagi eritmasi uchun aralashtirish xususiyatlarini o'rganishdan iborat. 2-amino-4-xlorbenzoy kislotasining erituvchi yordamida kristallanish harorati 273 K dan 320 K gacha bo'lgan harorat oralig'iga yaqin bo'lganligi sababli (278,15 dan 313,15 K gacha) harorat oralig'i tanlab o'rganilgan.[4]

Muvozanat eruvchanligi 101,2 kPa ostida (278,15 dan 313,15 gacha) K harorat oralig'ida organik erituvchilarda 2-amino-4-xlorbenzoy kislotasi uchun eksperimental ravishda aniqlandi. [5]Tanlangan sof erituvchilarda 2-amino-4-xlorbenzoy kislotaning

mol ulushi harorat oshishi bilan ortadi. Muayyan haroratda *N*-metil-2-pirolidon, etanol, *n*-propanol, izopropanol, etilbenzol, toluol, *n*-butanol, asetonitrilda yaxshi eruvchnligi kuzatilgan.[6]

Foydalanilgan adabiyotlar.

1. Amr A. Essawy a, Manal A. Afifi a, H. Moustafa b, S.M. El-Medani a DFT calculations, spectroscopic, thermal analysis and biological activity of Sm(III) and Tb(III) complexes with 2-aminobenzoic and 2-amino-5-chloro-benzoic acids. [Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy](#). Volume 131, 15 October 2014, Pages 388-397

2. Yan Kalembekevich, Małgorzata Kosińska, Lidiya Zapala. Complexes of aminobenzoic acids: A comprehensive review concerning synthesis, physical chemistry, structure and application. [Coordination Chemistry Reviews](#). Volume 348, 1 October 2017, Pages 25-53

3. Ganbing Yao, Zhihui Li, Zhanxiang Xia, Qingcang Yao. Solubility of *N*-phenylanthranilic acid in nine organic solvents from $T = (283.15 \text{ to } 318.15) \text{ K}$: Determination and modelling. [The Journal of Chemical Thermodynamics](#) Volume 103, December 2016, Pages 218-227

4. Anli Xu, Renjie Xu, Jian Wang. Solubility determination and thermodynamic modelling of terephthalaldehyde in ten organic solvents from $T = (273.15 \text{ to } 318.15) \text{ K}$ and mixing properties of solutions. [The Journal of Chemical Thermodynamics](#). Volume 102, November 2016, Pages 188-198.

5. Ganbing Yao, Qingcang Yao, Zhanxiang Xia, Zhihui Li. Solubility determination and correlation for *o*-phenylenediamine in (methanol, ethanol, acetonitrile and water) and their binary solvents from $T = (283.15\text{--}318.15) \text{ K}$. [The Journal of Chemical Thermodynamics](#) Volume 105, February 2017, Pages 179-186.

6. Xinbao Li *a*, Mingju Wang *a*, Yang Cong *b*, Cunbin Du *b*, Hongkun Zhao *b*. Solubility determination and thermodynamic modelling for 2-amino-4-chlorobenzoic acid in eleven organic solvents from $T = (278.15 \text{ to } 313.15) \text{ K}$ and mixing properties of solutions. [The Journal of Chemical Thermodynamics](#). [Volume 106](#), March 2017, Pages 71-83.