

***Cite this as:*** Qirong SHEN, Quan HE, Yuanjiang PAN, Cuirong SUN. Detection, isolation, and characterization of a novel impurity from several folic acid products[J]. Journal of Zhejiang University Science B, 2022, 23(7): 597-606.

<http://doi.org/10.1631/jzus.B2100970>

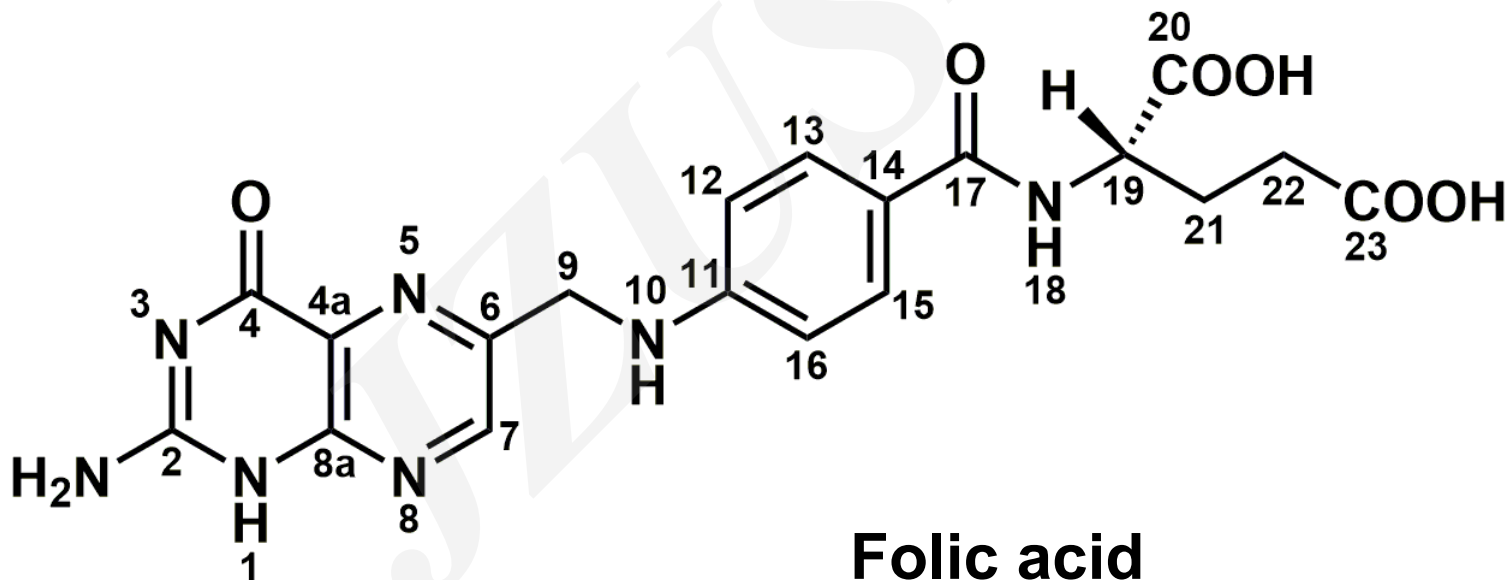
# **Detection, isolation, and characterization of a novel impurity from several folic acid products**

**Key words:** Folic acid, Impurity, Multidimensional NMR, QTOF-  
HRMS

# ***Folic Acid***

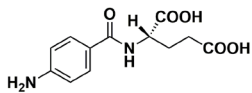
**Folic acid is an extremely important nutrient molecule for human beings, especially for pregnant women and infants.**

**Manufactured folic acid is often used for food fortification and nutritional supplement.**

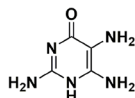


# Folic Acid Impurities

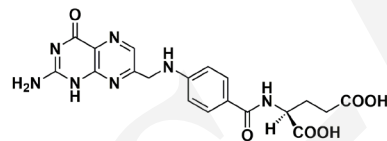
Impurities are inevitably produced during the synthesis, processing and storage of pharmaceuticals, which may bring potential toxicity to patients.



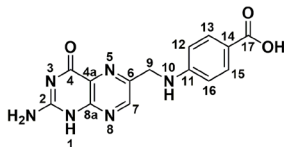
Impurity A



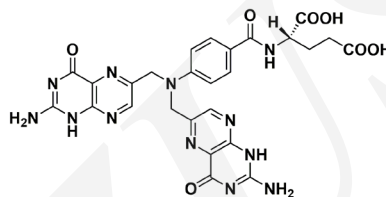
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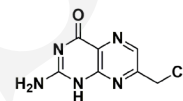
Impurity C



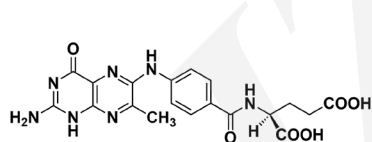
Impurity D



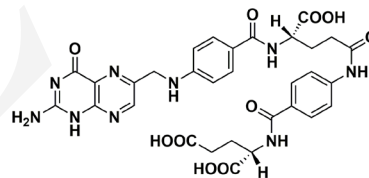
Impurity E



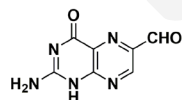
Impurity F



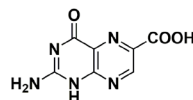
Impurity G



Impurity H



6-formylpterin  
(Fop)



6-carboxypterin  
(Cap)

**Impurities in folic acid products**

# A Novel Folic Acid Impurity

In this work, a novel, pharmacopoeia-unrecorded impurity (impurity K) was detected in some folic acid products and subsequently isolated from one of them. Its chemical structure was characterized.

