**Tegafur**

**Cat. No.:** HY-17400  
**CAS No.:** 17902-23-7  
**Molecular Formula:** C₈H₉FN₂O₃  
**Molecular Weight:** 200.17  
**Target:** Nucleoside Antimetabolite/Analogue  
**Pathway:** Cell Cycle/DNA Damage  
**Storage:** 4°C, protect from light

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### Solvent & Solubility

**In Vitro**  
DMSO: ≥ 48 mg/mL (239.80 mM)  
*“≥” means soluble, but saturation unknown.*

<table>
<thead>
<tr>
<th>Concentration</th>
<th>Mass 1 mg</th>
<th>Mass 5 mg</th>
<th>Mass 10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>4.9958 mL</td>
<td>24.9788 mL</td>
<td>49.9575 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.9992 mL</td>
<td>4.9958 mL</td>
<td>9.9915 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.4996 mL</td>
<td>2.4979 mL</td>
<td>4.9958 mL</td>
</tr>
</tbody>
</table>

Preparing Stock Solutions

Please refer to the solubility information to select the appropriate solvent.

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### BIOLOGICAL ACTIVITY

**Description**  
Tegafur (FT 207; NSC 148958) is a chemotherapeutic 5-FU prodrug used in the treatment of cancers; is a component of tegafur-uracil.

**IC₅₀ & Target**  
Nucleoside antimetabolite/analogue

**In Vitro**  
Tegafur is bioactivated to 5-FU by liver microsomal cytochrome P450 enzymes. 5-FU is subsequently converted into its active metabolites 5-fluoro-deoxyuridine-monophosphate (FdUMP) and 5-fluorouridine-triphosphate (FUTP) intracellularly; these metabolites inhibit the enzyme thymidylate synthase and intercalate into RNA, resulting in decreased thymidine synthesis, reduced DNA synthesis, disrupted RNA function, and tumor cell cytotoxicity.

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### REFERENCES

(2). 285-291.


[5]. Tegafur-uracil