**PRODUCT INFORMATION**

**Rivaroxaban**

*Item No. 16043*

---

**CAS Registry No.:** 366789-02-8  
**Formal Name:** 5-chloro-N-[(5S)-2-oxo-3-[4-{3-oxo-4-morpholinyl}phenyl]-5-oxazolidinyl]methyl]-2-thiophenecarboxamide  
**Synonym:** BAY 59-7939  
**MF:** C_{19}H_{18}ClN_{3}O_{5}S  
**FW:** 435.9  
**Purity:** ≥ 98%  
**UV/Vis.:**  \( \lambda_{\text{max}} \approx 251 \text{ nm} \)  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥ 2 years

*Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.*

---

**Laboratory Procedures**

Rivaroxaban is supplied as a crystalline solid. A stock solution may be made by dissolving the rivaroxaban in the solvent of choice. Rivaroxaban is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of rivaroxaban in these solvents is approximately 10 mg/ml.

Rivaroxaban is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, rivaroxaban should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Rivaroxaban has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

---

**Description**

Rivaroxaban is an orally active, direct inhibitor of Factor Xa (\( K_{i} = 0.4 \text{ nM} \)), which is a crucial component of the intrinsic and extrinsic pathways of the blood coagulation cascade.\(^1\) It demonstrates >10,000-fold greater selectivity for Factor Xa compared to other related serine proteases.\(^1\) In various animal arterial and venous thrombosis models, rivaroxaban is reported to inhibit thrombin formation without prolonging bleeding time and has been approved for clinical use as an anticoagulant in the prevention of stroke and the treatment of venous thromboembolisms.\(^2,3\)

---

**References**