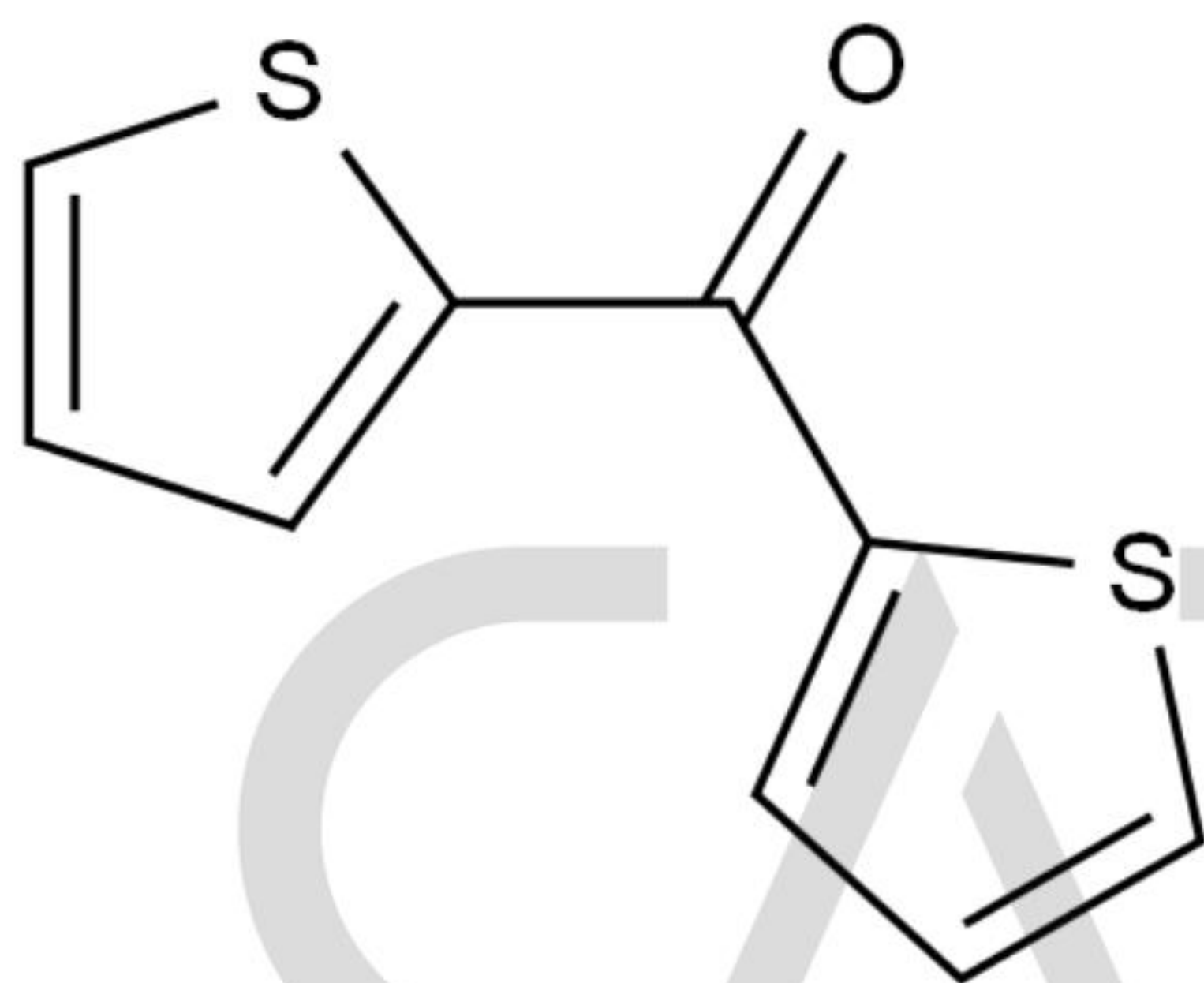


Certificate of Analysis

Reference Material & Standard

Product Name:	Tiotropium EP Impurity F	Catalogue Number:	C4X-17646
Synonyms:	N/A	Lot Number:	0313-RG-0079
CAS Number:	704-38-1	Expiry Date:	Mar 17, 2028
Molecular Formula:	C ₉ H ₆ OS ₂	Storage:	2°C ~ 8°C Protected from light and Sealed
Molecular Weight:	194.27	Warning:	

Chemical Structure:



Test Items	Method	Results
Appearance	Visual inspection	Light Yellow Solid
Identification	LCMS&HNMR	Confirmed
Purity	HPLC	99.405%
Loss On Drying	TGA	0.4089%
Assay		99.0%

Comment:

The calculation of the 100% method follows the formula (calculated on the non-dried basis):

$\text{Assay (\%)} = (100\% - \text{Loss On Drying}) * \text{Purity HPLC (\%)} / 100\%$

Loss On Drying is considered as absolute effect, HPLC purity is considered as relative effect.

Signature:

Prepared by:

Nice

Reviewed by:

Koi

Approved by General Manager:

David

Date: Mar 18, 2025

Date: Mar 18, 2025

Date: Mar 18, 2025

