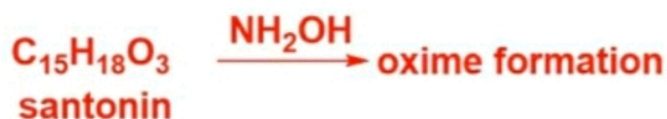


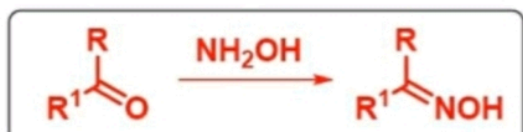
Structure Determination of Santonin

DBE = 07
Two double bonds (02)
Lactone (02)

Santonin forms oxime derivative with NH_2OH .



- ✓ Santonin contains carbonyl group and it was found to be ketonic (DBE = 01).
- ✓ This ketone behaves as α,β -unsaturated ketone. This is proved from the UV-spectrum of santonin (λ_{max} 236 nm, ϵ 11200).

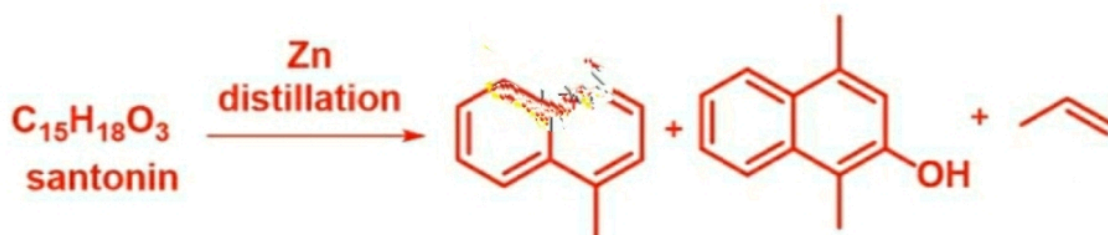


Structure Determination of Santonin

DBE = 07
Two double bonds (02)
Lactone (02)
Keto (01)

Presence of naphthalene skeleton: On distillation with zinc dust santonin gives a mixture of 1,4-dimethylnaphthalene, propene and 1,4-dimethylnaphthol.

✓ This suggests the presence of naphthalene skeleton (accounting for two rings, i. e. DBE = 02).



Structure Determination of Santonin

Formation of 7-ethyl-1-methylnaphthalene

from santonin was achieved by two different ways.

- ✓ This suggests the presence of 7-ethyl-1-methylnaphthalene (hydrogenated form) skeleton in santonin.

DBE = 07

Two double bonds (02)

Lactone (02)

Keto (01)

Naphthalene skeleton (02)

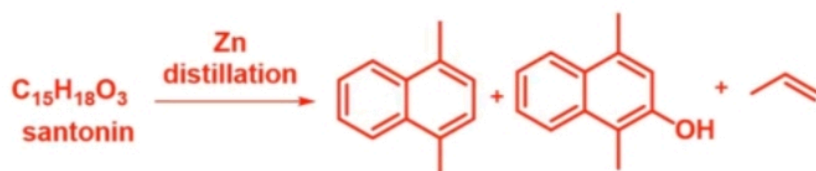


Structure Determination of Santonin

DBE = 07
Two double bonds (02)
Lactone (02)
Keto (01)

Presence of naphthalene skeleton: On distillation with zinc dust santonin gives a mixture of 1,4-dimethylnaphthalene, propene and 1,4-dimethylnaphthol.

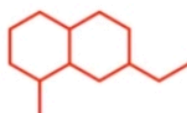
✓ This suggests the presence of naphthalene skeleton (accounting for two rings, i. e. DBE = 02).



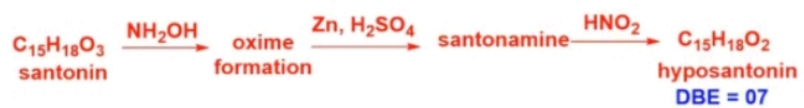
Structure Determination of Santonin

Information in hand

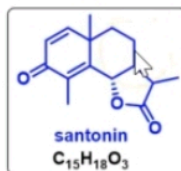
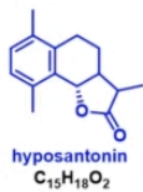
DBE = 07
Two double bonds (02)
Lactone (02)
Keto (01)
Naphthalene skeleton (02)



Formation of hyposantonin from santonin:



Structure Determination of Santonin



DBE = 07
Two double bonds (02)
Lactone (02)
Keto (01)
Naphthalene skeleton

Information in hand

DBE = 07
Two double bonds (02)
Lactone (02)
Keto (01)
Naphthalene skeleton (02)

