

initium[®]

FUNGICIDE



- a new fungicide active ingredient for the control of *Peronosporomycetes*

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EuroBlight workshop 2010 , Arras (FR)

May 3-6, 2010

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The Chemical Company



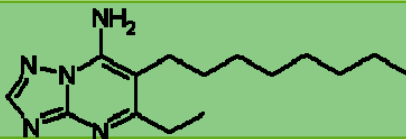
Phys.-chem. Properties & Mode of action

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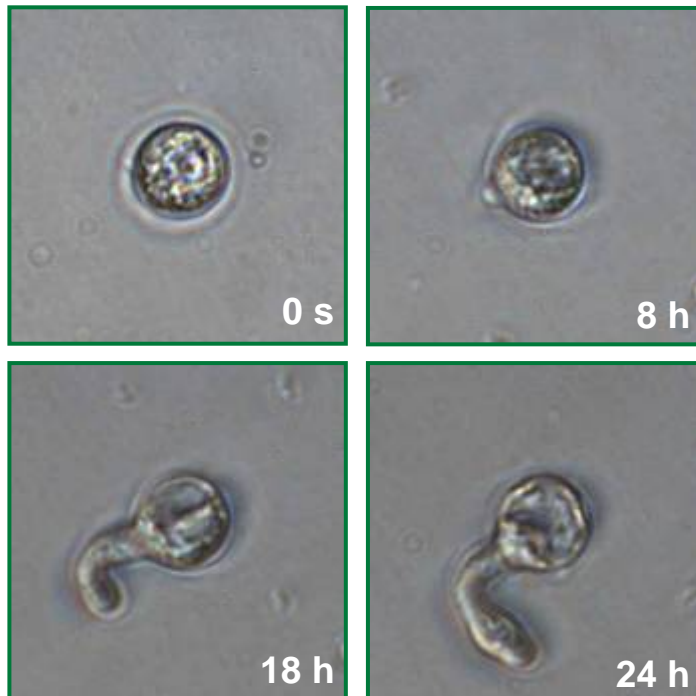
- Identity, physical & chemical properties

Trade name	Initium®
Chemical name (IUPAC)	[1,2,4] Triazolo [1,5-a] pyrimidin -7 amine, 5-ethyl-6-octyl
Common name	Ametoctradin (proposed to ISO)
Molecular formula	C ₁₅ H ₂₅ N ₅
Structural formula	
Vapor pressure	2.1 x 10 ⁻¹⁰ Pa at 20°C
Water solubility	0.15 mg/L at 20 °C (pH 7)
Partition constant	log P _{ow} = 4.40 (pH 7)
Photostability	DT ₅₀ 23 days

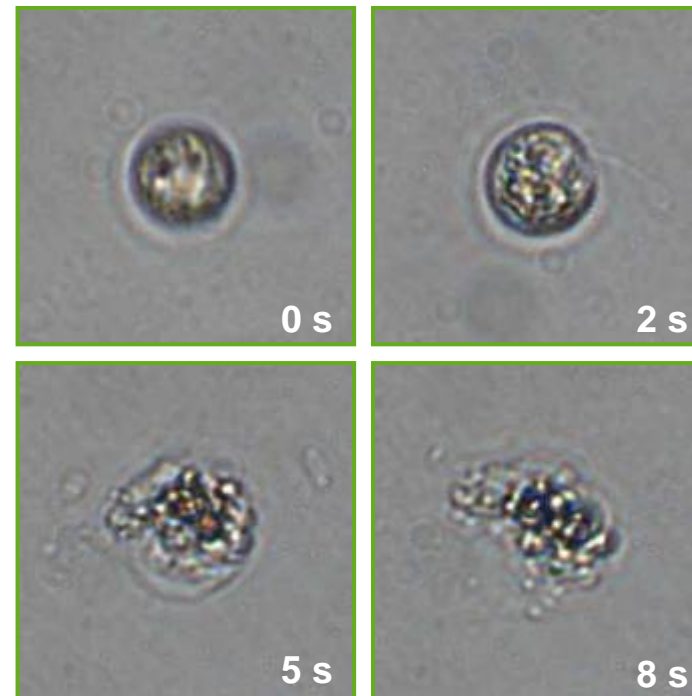
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- leads to zoospore bursting of *Phytophthora infestans*

Untreated zoospore

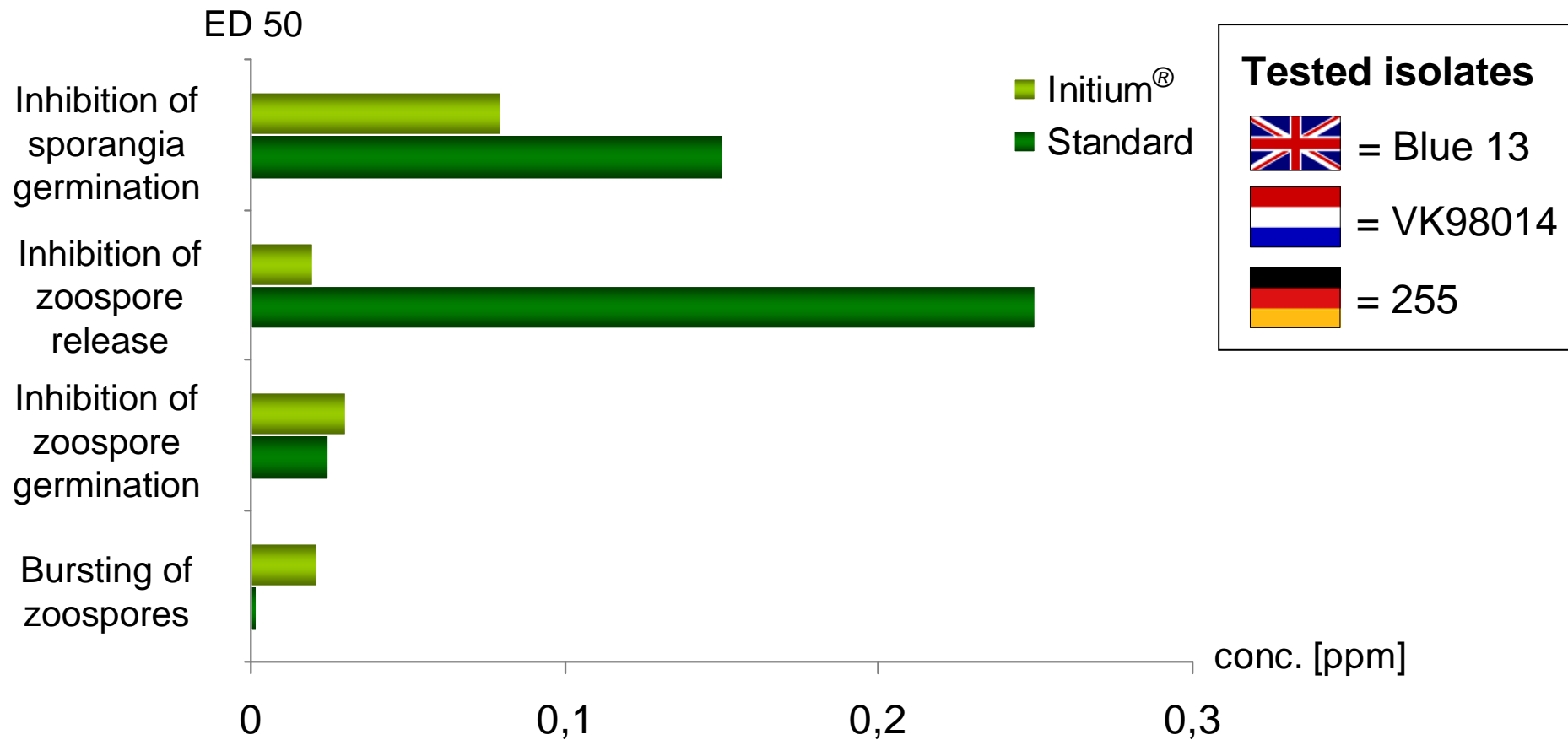


Burst zoospore after treatment with Initium



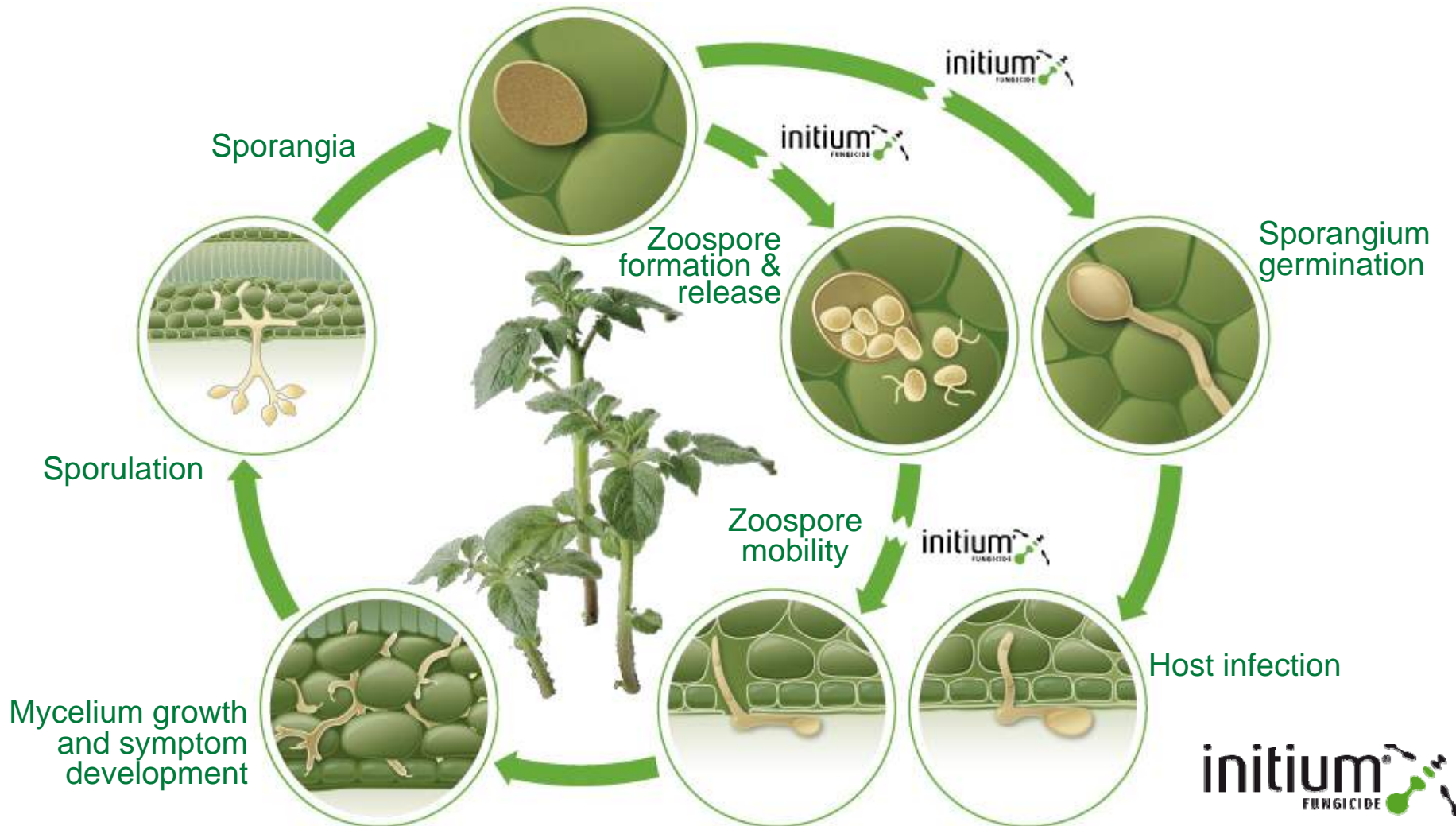
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- on the different life cycle stages of *P. infestans*



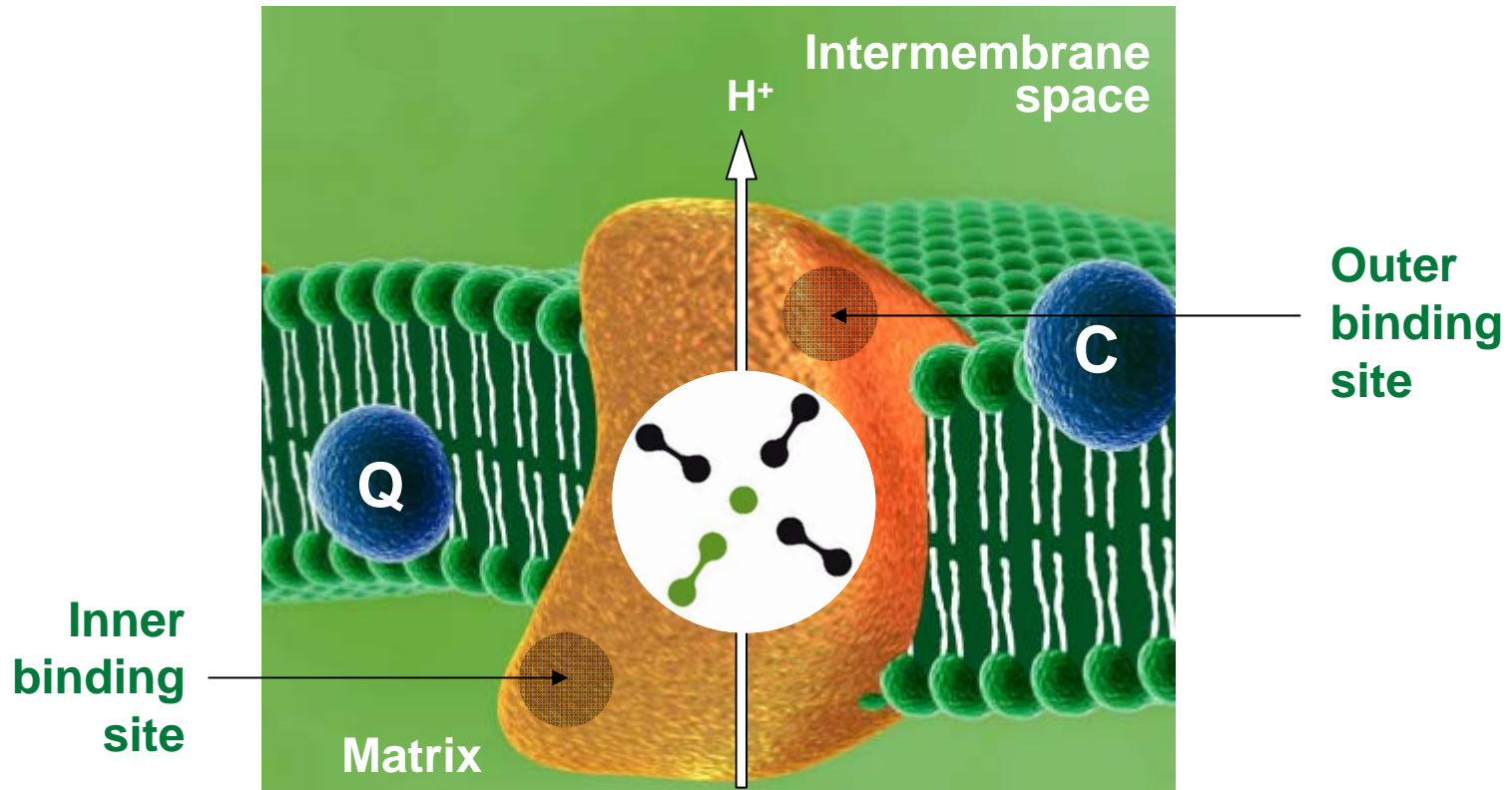
Premium preventive action

Initium® activity in the lifecycle of *Phytophthora infestans*



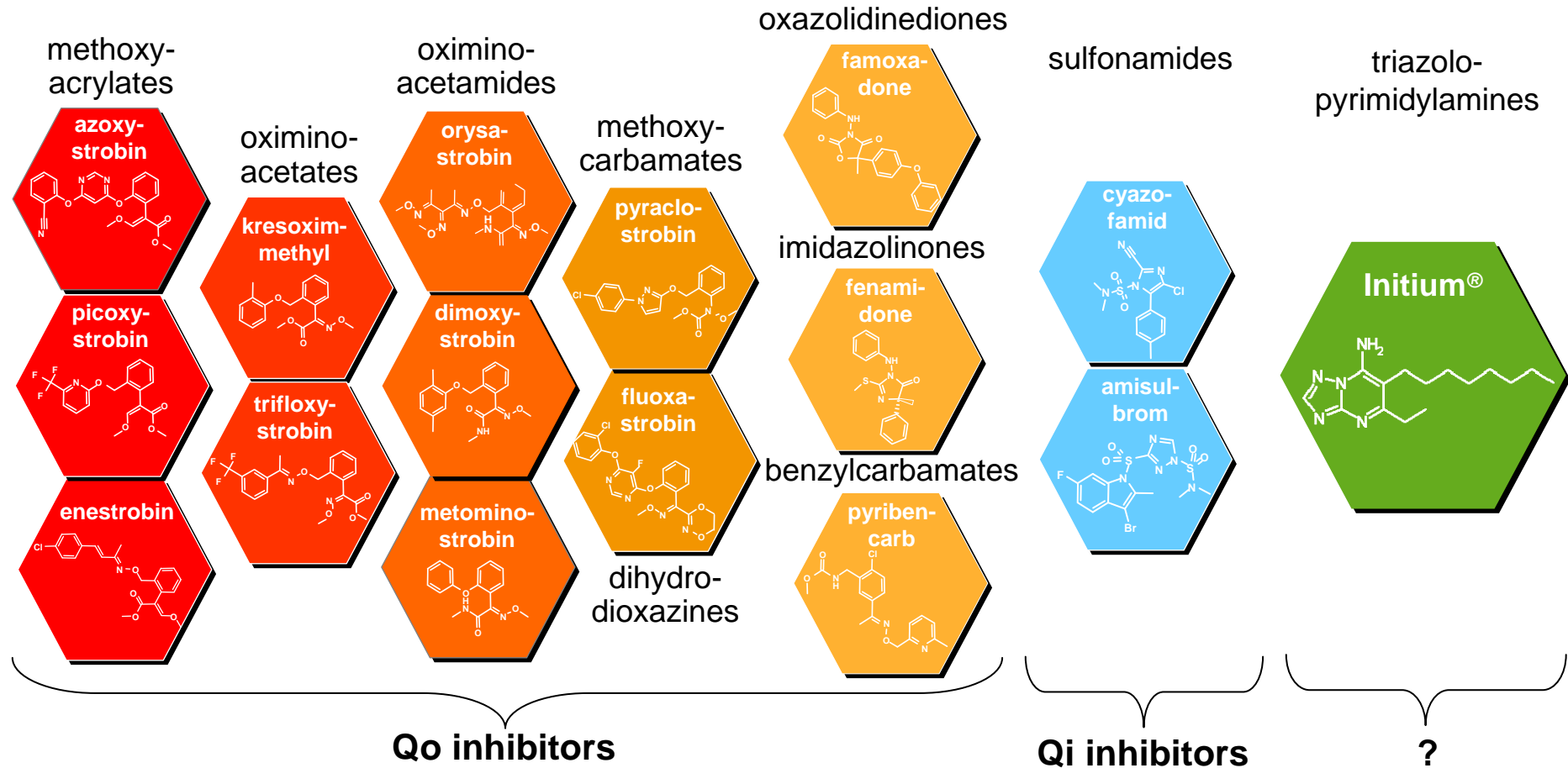
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- the molecular mode of action



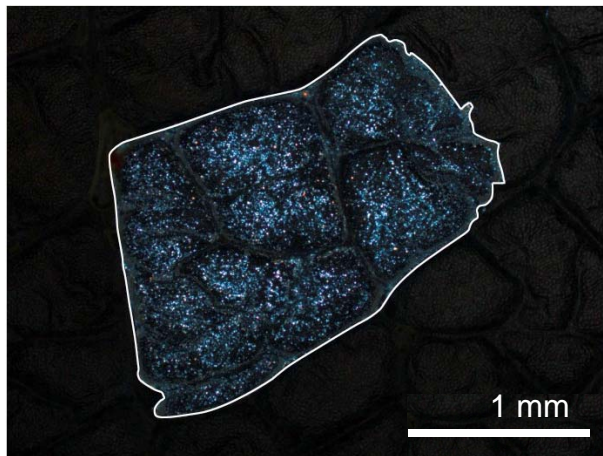
Initium®

- complex III inhibitor of a new chemical class

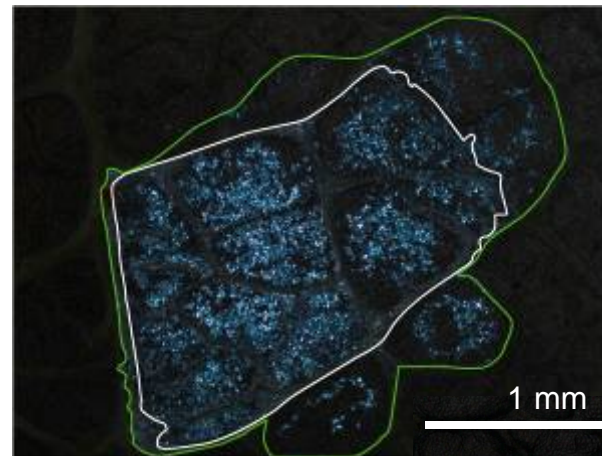


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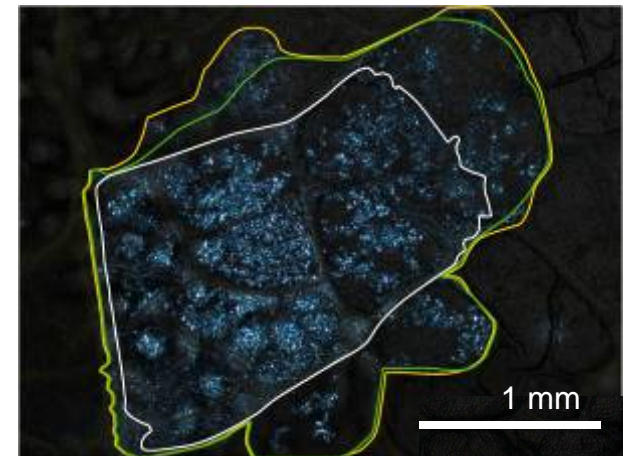
- re-allocation in the presence of moisture



Start



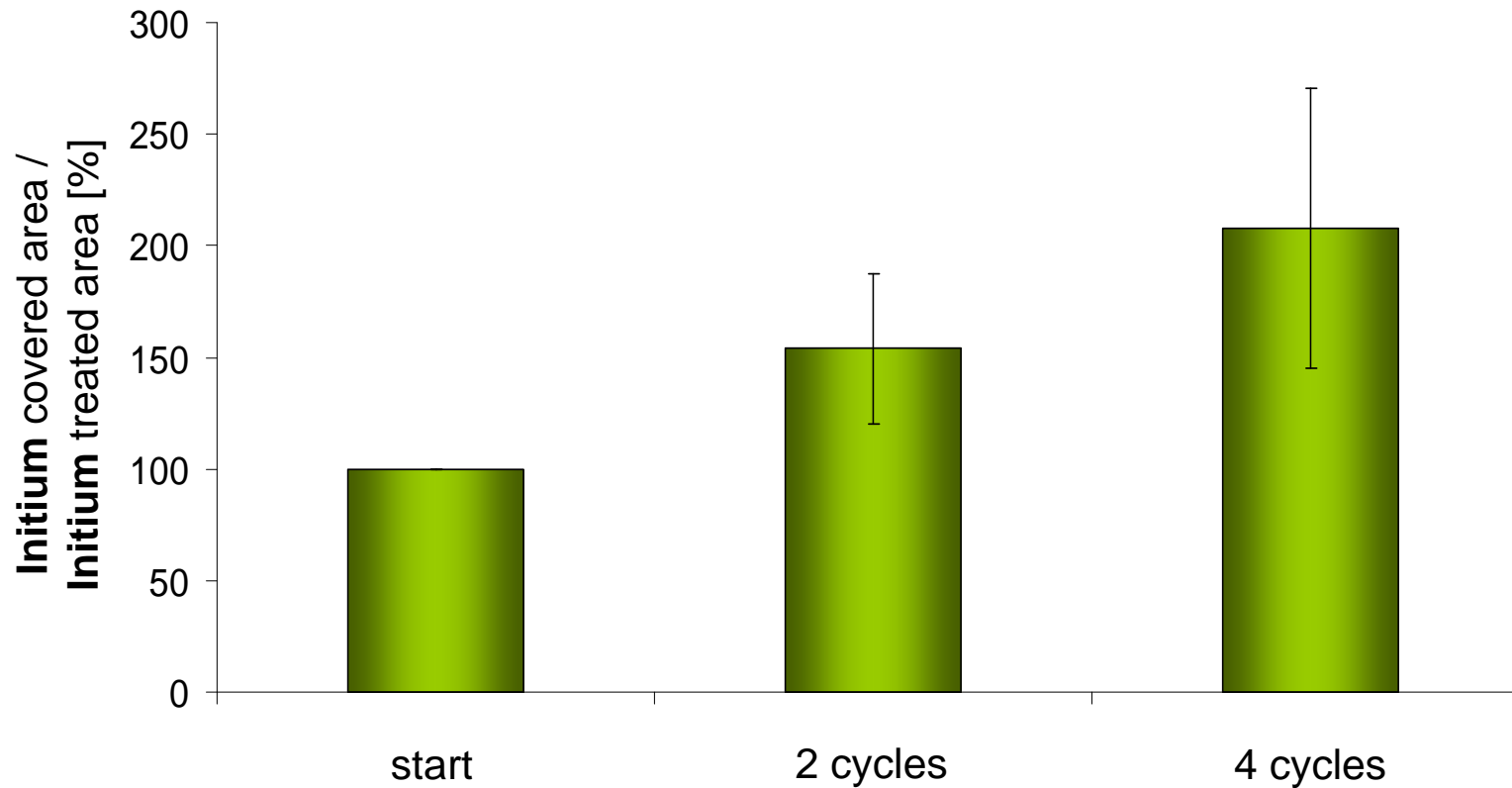
2 cycles



4 cycles

Initium[®]

- re-allocation in the presence of moisture



Initium®

- Forms a protective shield

High intrinsic efficacy
against infectious stages
of peronosporomycetes

Stable protective shield
through adsorption on
the wax layer



initium®
FUNGICIDE

Redistribution on the leaf
under the influence of
moisture

initium®
FUNGICIDE is the premium preventive fungicide



Regulatory Profile & Registration

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Initium®

-Toxicological profile

- **Not harmful to mammals** (After ingestion, dermal exposure or inhalation)
- **No irritation of eyes or skin, no sensitization**
- **No effect on development or reproduction observed, no genotoxicity**
- **No carcinogenicity** observed



- ⇒ **No toxicological R-phrase**
- ⇒ **Exceptionally high ADI** (Acceptable Daily Intake for consumers) leads to consumer risk cup filled less than 1%, taking into account all developed uses.
- ⇒ **Exceptionally high AOEL** (Acceptable Operator Exposure Level for workers/farmers) leads to high margins of safety for the operator.

Initium[®]

- Ecotoxicology and Environmental Fate

- **Non-toxic to bees, predatory mites and other arthropod species.**
- **Virtually non-toxic to birds.**
- **low risk to aquatic organisms like fish, daphnia and algae.**
- **Practically non-toxic to earthworms and soil microorganisms.**
- **Extremely low vapour pressure**
- **Fast degradation in the soil and natural water/sediment (into harmless metabolites)**



Initium[®]

- Regulatory summary

Based on the study results, we can conclude that Initium

- is safe for humans, animals and the environment
- displays an overall excellent regulatory profile with very favourable toxicological and eco-toxicological properties, resulting in an excellent consumer and operator safety situation



Initium®

- Registration on EU and country level

