Biocontrol

# Nexy®

Post-harvest biofungicide

**NEXY®** is a unique post-harvest technology containing the naturally-occuring yeast *Candida oleophila* strain O to protect Citrus fruits, Bananas and Apples. **NEXY®** is a broad-spectrum biofungicide active against several pathogens as *Botrytis cinerea, Penicillium spp, Colletotrichum musae.*

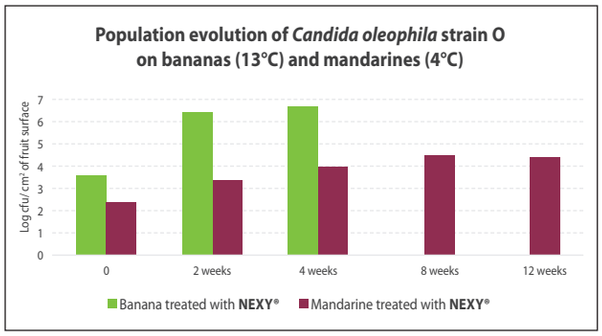
## Product Identity

- **Active substance:** *Candida oleophila* strain O is listed as an approved active substance in Europe (Regulation EC No 1107/2009 - Annex I)
- **Composition:** **NEXY®** is made of two components :
  - **NEXY®** Biomass: $3.10^{10}$ CFU/g of *Candida oleophila*
  - **NEXY®** Additive: Calcium gluconate
- **Formulation:** WG, wettable granule
- **Application:** Post-harvest
- **Mode of application:** Spraying, drenching, dipping, etc.
- **Maximum Residue Limit (MRL):** Exempted from MRL in the EU, exempted from the requirement of a tolerance for residues in the USA
- **Shelf life :** 6 months at 20 °C / 18 months at 5°C

## Mode of Action

**NEXY®** has a preventive action. *Candida oleophila* works through spatial and nutritive competition. The pathogen growth is reduced due to the lack of space and nutrients. Resources depletion stops pathogens growth.

## Technical features of *Candida oleophila* strain O




- **Ability to grow at low temperature** after application to ensure a long protection.
  - Multiplication of the yeast population by 1'000 in 2 weeks on bananas at 13°C
  - Multiplication of the yeast population by 100 in 8 weeks on mandarines at 4°C
- **Stable in solution**, the mixture can be kept during 2 days at 20°C.

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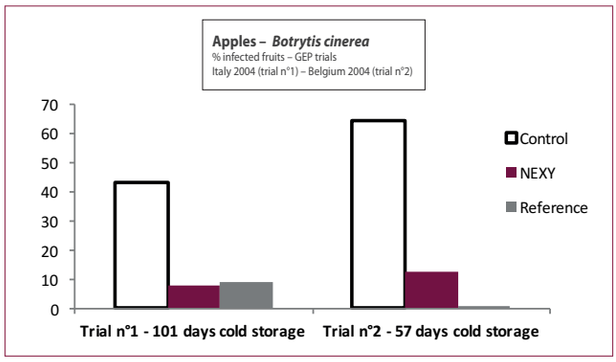
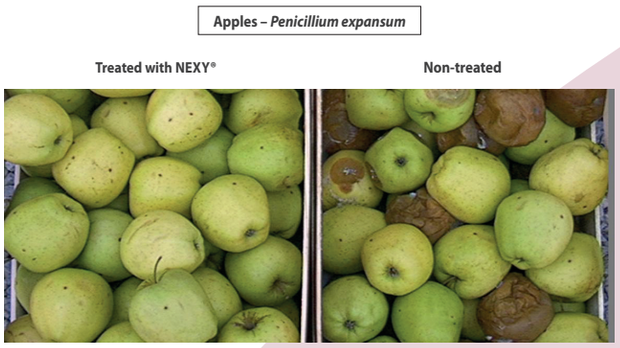
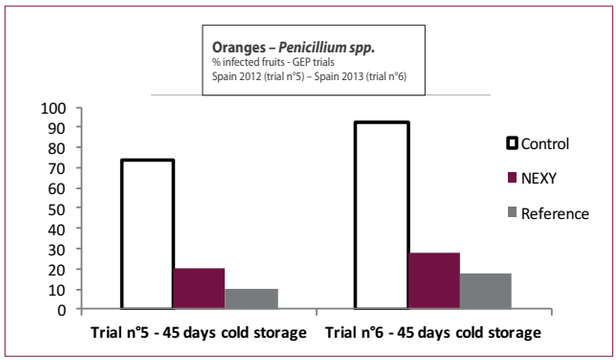
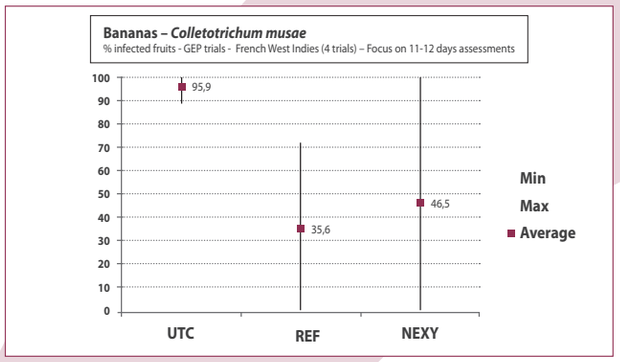
# Trial Results




*Note : All trials are GEP trials (with artificial inoculation)*

**NEXY®** used on apples, bananas, citrus fruits shows an efficacy comparable to the chemical references. **NEXY®** is a good alternative to chemical fungicides. In addition, biological control of post-harvest diseases is of uppermost interest comparatively to chemical fungicides: absence of residues in the food chain and low risk of appearance of fungicide resistant pathogens.

# Application advices

- **NEXY®** can be used in drenching, spraying, dipping, etc. The use of nebulization (cold fogging) is being investigated.
- Rehydrate **NEXY®** biomass in water (20-25°C) during 30 min while agitating from time to time and then add **NEXY®** additive and agitate continuously until total dissolution (15 to 30 min).
- Maintain the mixture under agitation during the application.
- **NEXY®** can be kept after opening in its own packaging during 14 days in cold condition (5-6° C), or 2 days at 25°C.
- Compatibility:
  - Compatible with sodium hypochloride (until 100 ppm)

# Packaging

- One pack containing 33g of **NEXY®** biomass and 200g of **NEXY®** additive
- Other packagings: on request

# Usages and doses

| Crop | Usage | Doses | Registration in | Registration pending in |
|---|---|---|---|---|
| **Apples & Pears** | *Botrytis cinerea, Penicillium expansum, Penicillium spp* | 33g of **NEXY®** biomass and 200g of **NEXY®** additive for 100 L of mixture | France, United-Kingdom, Netherlands, Austria USA : EPA level | Germany, Poland, Spain, Greece, Italy |
| **Bananas** | *Colletotrichum musae* | | France (West Indies) | Spain,[1] |
| **Citrus** | *Penicillium spp, Penicillium italicum, Penicillium digitatum* | | France | Spain, Italy, Greece |

[1] Other countries (Latin America, Central America & Africa from 2018)

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