

Seed Viability Staining Solution (TTC Method)

Cat #: A-CSH389

Size: 100mL

Storage: 2-8°C, avoid light (6 months)

Product Composition

Component	Size	Store at
Seed vital vitality staining solution (TTC method)	100mL	2-8°C, and were protected from light

Product Description

TTC is widely used as a hydrogen acceptor in enzyme experiments. The amount of TTC reduction can indicate dehydrogenase activity, which can be used to assess the viability of plant seeds such as wheat, mung bean, rice, rapeseed, and peanuts. The TTC staining solution permeates the cells of the embryo, resulting in a red coloration. When the vitality of the embryo decreases, respiration significantly weakens, dehydrogenase activity decreases, and the color change of the embryo becomes less noticeable. When the embryo is non-viable, there is no coloration. Therefore, the degree of staining can indicate the strength or weakness of seed viability.

Usage

1. Before the experiment, soak the test seeds in warm water (30-35°C) for 2-6 hours to ensure full hydration of the seeds.
2. Carefully remove the seed coat from the test seeds without damaging the embryo. Place the prepared seeds in a culture dish or porcelain bowl and add the Seed Viability Staining Solution, ensuring that the seeds are just covered. Incubate in a constant temperature chamber (30-35°C) for 0.5-2 hours for staining. (For larger seeds, increase the staining time accordingly).
3. Immediately after staining, perform the assessment as prolonged exposure may cause fading. Pour out the staining

solution and rinse the seeds with clean water 1-2 times. Observe the staining of the embryo.

Staining Results

Strong vitality	The embryo is well developed and intact, and the whole embryo is colored red; the leaves are not at the junction of the middle axis and cotyle; in the root tip, the other parts are intact.
Weak vitality	carnation
Inviability or sterility	Total or largely colorless embryos; root tip; cotyledons did not stain or lost more than one second tissue; embryos stained with light purplish red or grucish red; cotyledons connected to the axis or necrotic on the radicle; and damaged and stunted immature seeds

Notes

1. After staining, immediate observation is recommended to prevent fading over time.
2. The staining solution should be used as soon as possible after opening the bottle, as its efficiency may decrease. If it turns red, it should be discarded.
3. The recommended staining temperature is generally between 25°C and 35°C.
4. For your safety and health, please wear a lab coat and disposable gloves while handling the solution.

Disclaimer

The reagent is only used in the field of scientific research, not suitable for clinical diagnosis or other purposes.