



NEW CROP-SPECIFIC CHIP FOR THE AMPHA P20

Watermelon Pollen Ploidy

From flower to ploidy result in under a minute — no DNA extraction, no staining, no lab required. Take 2n / 4n decisions directly where your plants grow.

— Powered by label-free Impedance Flow Cytometry

< 1 min

RESULT TIME

0

STAINING STEPS

4

OUTPUT PARAMETERS

In-field

NO LAB REQUIRED

SIMPLIFIED WORKFLOW

Three steps from flower to ploidy data

1 Collect pollen from several flowers

No tissue damage, no chemical pretreatment — collect fresh pollen directly in the field.

2 Dilute in conductive buffer

Suspend pollen in the supplied buffer. No reagents, no dyes, no centrifugation.

No staining · No extraction

3 Load AmphaChip & read result

Insert into the Ampha P20. Automated data analysis delivers ploidy and phenotyping data in under a minute.

Automated data analysis

KEY APPLICATIONS



Colchicine treatment verification

Confirm polyploidization has reached the target 4n level after treatment.



Chimera & reversion detection

Identify 4n plants with branches carrying 2n flowers — protecting line integrity.



Breeding line characterization

Phenotype pollen concentration per flower as a line trait for selection.



Reproductive quality screening

Assess viability and aberrant-cell share to evaluate reproductive fitness.

MEASUREMENT OUTPUTS

- **Ploidy level** — 2n / 4n classification per sample
- **Pollen viability** — phenotyping and line characterization
- **Aberrant pollen cells** — indication of abiotic stress
- **Pollen concentration** — phenotyping of pollen amount per flower



Ampha P20 + AmphaChip

The portable Ampha P20 runs the crop-specific AmphaChip without lab infrastructure — battery-powered wherever you need it. Insert the AmphaChip for instant, automated data analysis in the greenhouse or trial field.

Bring ploidy decisions to the field.

[Talk to an Expert →](#)

The information contained herein is to the best of our knowledge and complete. However, measurement samples and cell species vary in properties. Therefore, deviation to other cell analysis methods may occur. Nothing contained or stated herein, including results obtained from the use of the Ampha P20, shall be construed to imply any warranty or guarantee.



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