



## AMPHA Z40 POLLEN ANALYZER

The Ampha Z40 is a new high-end laboratory instrument for pollen analysis and succeeds the proven Ampha Z32. It covers all needs for efficient pollen analysis from plant breeding to seed production. An innovative technological platform ensures accurate analysis of pollen viability and pollen concentration in just one measurement.

### UNIVERSAL

Pollen analysis of more than 250 species

Determination of developmental stages of microspores

Determination of pollen ploidy

### EFFICIENT

Increase breeding and production efficiency

Increase yield and reduce cost

Increase reliability in seed production

### FLEXIBLE

Covers all pollen research tasks

Real time manual gating and adaptation of settings

Monitor and modify existing protocols

### UNIVERSAL

The Ampha Z40 Pollen Analyzer allows to measure pollen of all relevant plant species ranging from vegetables and row crops to ornamentals and trees. Amphasys provides detailed application recommendations and support for more than 250 species.

### EFFICIENT

The information provided by the Ampha Z40 can be used along all stages from early research in plant breeding up to commercial seed production: to improve doubled haploid (DH) plant production, for line selection in breeding, to optimize pollen storage, pollination protocols and female to male ratio, for routine pollen quality control in commercial seed production

### FLEXIBLE

The Ampha Z40 is the high-end pollen analyzer which covers all requirements for research as well as for routine measurements. The possibility to adapt protocols and settings in a flexible way to match the requirements of specific research topics makes it an ideal tool for in-depth analyses: creation of own protocols, manual gating strategies, free variation of settings, adaption of buffer solutions



## Pollen Analysis - Areas of Use

The Ampha Z40 is the ideal instrument for collecting information on lines and genetic material from early research to commercial seed production. It supports process optimization with cost reduction and improvements for higher seed yield.

### RESEARCH

- Identification of microspore developmental stage
- Early prediction of embryo yield
- Correlation of recalcitrant microspores with parental lines

### BREEDING

- Precision phenotyping
- Early selection of lines
- Evaluation of heat stress and other abiotic effects on pollen

### PRODUCTION RESEARCH

- Optimization of female to male ratio
- Correlation of pollen viability and seed set
- Development of pollen storage protocol

### PRODUCTION

- Routine pollen quality control
- Application of pollen dilution formulation
- Ensure sufficient pollen quality before pollination

## Research

With the identification of the developmental stage of microspores you can select only these microspores which are appropriate for use for DH production. It is even possible to predict the yield of the embryos which turns your DH production much more efficient.

## Breeding

Pollen quality is an important parameter in plant breeding as it provides information about the impact of heat stress and other environmental effects on lines and allows an early elimination of bad pollinator lines.

## Production Research

In production research, the Ampha Z40 is the tool to improve efficiency: with the optimization of the female to male ratio highly valuable space can be saved, the knowledge about the right pollen viability threshold helps to produce only the necessary amount of pollen and to develop pollen dilution formulations. Furthermore, the development of pollen storage protocols secures a permanent stock of high-quality pollen.

## Seed Production

In seed production, our technology allows to routinely check pollen quality and to prevent a loss of highly valuable pollen. This can be done to check if the pollen viability has still sufficient viability before harvesting or before using it for pollination. Especially if pollen is shipped between locations, the Amphasys technology secures a fast and accurate quality check before and after shipping – independent from the location.



Amphasys AG | Technopark Lucerne | CH-6039 Root D4 | Switzerland



[info@amphasys.com](mailto:info@amphasys.com)



[www.amphasys.com/ampha-z40-pollen-analyzer](http://www.amphasys.com/ampha-z40-pollen-analyzer)