

## Protein Crystallization News

February 2010

### Real Time Temperature Reporting

The TG40 System enables real-time temperature monitoring during optimization. This exciting new feature in the TG40 Control Software reports that the set temperatures were maintained during the experiment. The real-time monitoring enables plotting of the temperatures of each row for a visual display of temperatures during the experiment

[More Details](#)



Experimental temperature profile

### TG40 System

Centeo Biosciences TG40\* System for protein crystallization is the first system designed specifically to enable optimization and screening of crystallization temperatures in a portable, hand-held device.

The TG40 System enables:

- ★ Rapid screening of experimental temperature conditions from 4°C to 60°C.
- ★ Portable temperature control maintains set temperature during observation and imaging.
- ★ Monitoring of crystallization temperatures in real-time.

\*Note: The TG40 System was previously known as the "T-GRID". The name change to TG40 was done for enhancements and expansion of the product line.

*New products coming soon!*

[More Details](#)

### TG40 System

Exciting news! The TG40 System is now available from stock. Contact Centeo Biosciences to place your order.

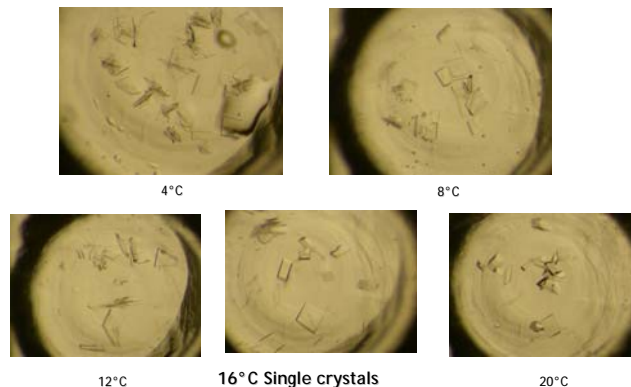


### Applications - TG40 System Temperature Screening

Temperature screening can be a useful tool to optimize crystallization conditions. Whilst most experiments are carried out at 4°C and at 20°C, these do not always produce a suitable crystal. Temperature screening allows exploring other areas of the phase diagram which can produce a better crystal, without the need of setting a new experiment, thus saving precious sample and protein to crystallize.

Shown here are the results of a recent set of experiments using the TG40 system to screen for the optimal temperature conditions. While some small crystals formed at other temperature conditions, the largest crystals formed at 16°C.

For further information on the importance of temperature screening, please [download](#) the presentation given at the ECM 2009 Meeting by Dr. Emmanuel Saridakis (Institute of Physical Chemistry, N.C.S.R. Demokritos, Athens and Imperial College, London).



Optimization of protein crystallization conditions by temperature screening. Courtesy of Andrew Bent.