Calibrating Sterilization Tunnels or Process Validation

Dry heat is often used for sterilization instead of moist heat as some materials are sensitive to moisture. Dry heat ensures that glass and other lab equipment is free of pyrogenic material, which are too small to be eliminated by filtration. The dry heat will disintegrate pyrogens to harmless molecules and atoms.

The sterilization process in a chamber or a hot air tunnel is critical, and regular validation is required. Validation is defined as the documented procedure of obtaining, recording and interpreting results to ensure that the dry heat sterilization process has been consistently effective. The validation of a dry heat sterilizer consists of accurate measurement of the temperature at critical points within the sterilization chamber.

The dry heat process generally employs a temperature between 250 and 400°C for a varying amount of time. The sterilizer is required to heat all parts of its load to the specified temperature for a specific period, long enough to achieve the desired sterility.

To comply with international standards, all sensors should be calibrated before and after the validation test. The data generated should be compiled to evaluate the ability of the sterilization tunnel to sterilize and depyrogenate the different sizes of vials.

Manufacturers in the pharmaceutical, medical or food industry can profit by using our PTC-425 for calibrating their sterilization tunnels, as it has the ideal temperature range from 33 to 425°C and an accuracy of ± 0,13°C.

The PTC-425 calibrator serves three purposes in relation to heat tunnels:
1: Calibrate all fixed sensors in the tunnel
2: Calibration of heat tunnel validation sensors, both pre and post test
3: Calibration of overheat security switch sensors

In addition, PTC-425 also features an extremely user-friendly navigation, a large color display, work order functionality, and high speed heating and cooling times.