BIOSYNERGY, INC.

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LABTEMP® 40 SURFACE TEMPERATURE INDICATORS

Biosynergy's LabTemp® 40 indicators are general purpose temperature indicators designed for instantaneous and continuous visual temperature monitoring. The indicator is disposable; although in many applications it can be affixed to an object and used for prolonged time periods, e.g., up to 18 months. It can be used on all types of plastic, glass, metal, and wood lab ware, as well as on curved, round and flat surfaces. LabTemp® 40 can be used on items stored in incubators, water baths (for short-term immersion in water), and even refrigerated centrifuges. LabTemp® 40 indicators should be used where monitoring of surface temperature is needed or desirable.

MICROBIOLOGY – Temperature is of great importance in clinical microbiology, where pathogen identification requires that cold shock at the time of medium inoculation and unfavorable incubation temperature be avoided, particularly if the clinical sample has a low viable count. Inoculated petri dishes are generally stacked in incubators, and significant amounts of heat, generated by growth in other cultures, can accumulate in cultures stored in the center of the stack. False negative culture results and misidentification of microorganisms due to atypical morphology at inappropriate culture temperatures increase patient morbidity and mortality.

TISSUE CULTURES – Animal and plant tissues have optimum in vitro growth temperature requirements which are even narrower than those for microorganisms. **Precious strains can be lost when cultured or incubated at inappropriate temperatures**.

ENZYMOLOGY – Enzyme reaction rate is influenced by reaction temperature, and **each enzyme has a temperature optimum**. The optimum may be fairly broad or narrow, depending on the specific enzyme and its purity. However, **when enzymes are used for analytical purposes, temperature control and monitoring are critical for reproducibility**.

ANALYTICAL CHEMISTRY – Volumetric glassware is manufactured to contain or to deliver at a specific temperature, 20°C. If volume measurements or dilutions are made at other temperatures, significant errors are introduced. **Analyses which utilize color reactions for quantitation generally require a specific reaction temperature in order to insure reproducibility**. Certain reactions conducted on microscope slides, such as agglutination reactions, require specific reaction temperatures.

ORGANIC CHEMISTRY – Many chemical reactions, such as exothermic, endothermic, hydrolytic, and polymerization reactions, require specific reaction temperature to produce reasonable yields. Organic separations and purifications, such as chromatography and distillation, generally require specific temperature conditions for efficiency.

LabTemp® 40 indicators monitor temperatures between 19-21°C and 24-41°C and are valuable in insuring precision and accuracy of temperature dependent laboratory procedures. **For a free sample or additional information, please call toll-free, 800-255-5274, or visit our website at www.biosynergyinc.com.**