

Non-Contact Forehead Infrared Thermometers: Critical in COVID-19 Response



Situation: Preventing Virus Spread Among Employees

Divine Flavor was founded in 2006 as the distribution arm of Grupo Alta, one of Mexico's largest agricultural companies. Created with the purpose of selling organic and sustainable, non-GMO produce, the company sells a diverse assortment of fruits and vegetables, including nine varieties of table grapes. They currently export to nearly 30 countries. Divine Flavor boasts products with delicious names like, Jellyberries (grapes), Beefsteak (tomatoes), and Tropic Beauty (peaches).

Values such as loyalty, solidarity, respect, and social and environmental responsibility have guided the company's marketing efforts, as well as the management and development of its workers. The Alta Foundation was forged to improve the quality of life for workers. The foundation proudly promotes employee health by operating two clinics. It seeks to enhance overall well-being by also providing scholarships and social/recreational activities.

Divine Flavor has managed the COVID-19 pandemic in a number of very effective ways. Sales Manager, Carlos Bon and the rest of the management team believe everyone has a part to play in preventing the spread of COVID-19 and establishing a culture of good health. Management has ensured employees are given vital information about virus symptoms and

prevention and extra emphasis is being placed on good hygiene. Employees are expected to follow distancing recommendations, and non-essential employees are working from home. No visitors are allowed on company premises unless there is a severe maintenance issue or other emergent situation. The company proactively purchased non-contact forehead infrared thermometers and began screening workers for fever. In addition to taking temperature, employees are asked questions to determine if they, or their family members, have virus symptoms.

Problem: Clinical Thermometer Not Feasible During Pandemic

In May, employees at Divine Flavor's repacking facility tested positive for COVID-19. As this is the company's busiest time of the year, arrangements were immediately made for all employees and management (about eighty individuals) to be tested for the virus. Through this measure, company management discovered that many of the employees who tested positive for the virus were asymptomatic. Nevertheless, they increased their efforts to try and limit the outbreak. Following CDC and local health department guidance, staff were asked to stay home if they had worked closely with an employee who tested positive. Divine Flavor management knew that measuring employee temperature would be a critical step in limiting the COVID-19 spread at their facility.

They also knew that using a clinical thermometer would not be the best option, because it requires contact with the body, posing a risk of further COVID-19 transmission. An electronic thermometer is a type of clinical device which uses probes to measure temperature from the mouth, armpit or rectum. It works by measuring the amount of resistance that occurs when an increase in heat slows down the electricity flowing through the probe. A microchip in the probe measures the resistance and gives the temperature reading.

Clinical thermometers which measure body temperature from the ear are also popular. An aural thermometer uses an infrared sensor to measure the temperature of energy radiating from the ear drum. A challenge to taking temperature this way is that the probe goes inside the ear. While Divine Flavor's management recognizes that clinical thermometers are more accurate, they understand that using that type of thermometer during a pandemic is not a viable option, because the goal is to prevent the spread of illness.

Solution: Non-Contact Infrared Forehead Thermometer

The Non-Contact Infrared Forehead Thermometer, Model 15004, is an FDA 510(k) cleared medical device. It is specifically designed to take human temperature, without making contact with the body. Non-contact infrared forehead thermometers work by

detecting the radiation energy being emitted by the arterial blood flow in the forehead, which is in close proximity to the heart and runs just below the skin. When the radiation sensor of the thermometer is activated, the forehead temperature measurement is taken by detecting the infrared heat generated by the arterial blood flow.

The device is an excellent choice for small and large work groups, as it can be used for thousands of measurements, and automatically stores the most recent 32 readings. It offers user selectable Celsius or Fahrenheit temperature scales, and an optional alert which is activated if the measurement reaches a specific temperature. This is ideal for identifying employees who are experiencing fever.

At less than one pound, Model 15004, is very easy to handle. The operation

is simple, and readings are displayed immediately. The thermometer can also be used to measure temperature behind the ear in the event there is perspiration present on the forehead.

Results: IR Thermometer Completes Virus Prevention Plan

Divine Flavor is currently using the non-contact forehead infrared thermometers, Model 15004, to screen all eighty personnel at the company's Nogales, Arizona facility. Employee temperatures are measured each day before work, and again in the afternoon. According to Michael Dupuis, Quality Assurance and Public Relations Coordinator, "We've been implementing this procedure for many weeks." Dupuis goes on to say, "A temperature higher than 99°F, raises a flag, and the temperature is taken

again, according to CDC guidelines." When a worker is found to have a fever, the action taken is on a case by case basis, per company guidelines. So far, only one or two employees have had temperatures over 100°F. Those workers were sent for COVID-19 testing and asked to self-quarantine at their homes. Fortunately, the test results were negative.

When asked about his impression of the Non-Contact Infrared Forehead Thermometer, Dupuis said, "For the most part, it's easy to use. It's not too complex." Divine Flavor's harvest season will be completed in a few weeks. The company intends to have a successful harvest, as they continue using the non-contact forehead infrared thermometer to help limit the transmission of COVID-19.

References

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