



Memorandum

Date: October 12, 2007
From: John Beck
Subject: Measuring the pH of Cheese

Soft Cheese:

If you want to measure the pH of a soft cheese you can use a pH meter equipped with a metal piercing probe. Either portable or bench-top ISFET meters can be equipped with piercing metal probes (non-glass) that also have ATC- automatic temperature compensation. If the cheese is very soft you can, with care, use a spear-tip pH probe (glass) along with an ATC probe.

Hard Cheese:

In order to measure the pH of a hard or semi-solid cheese you use a flat surface (glass) probe along with an ATC probe. None of our flat-surface probes are available as triode or "all-in-one" designs so for accuracy you need to use an ATC probe as well. In order to ensure a connection of the flat-surface probe and the ATC probe to the surface of the cheese you can add a few drops of water to the cheese. Alternatively, you can blend a 50:50 mixture of cheese with distilled water into a slurry and use a standard electrode / ATC or a triode / All-in-One electrode. You can also use the ISFET meters with the integrated ATC probe to measure pH in the cheese-water slurry.

You can use the non-glass probes to measure the pH of semi-solid cheese but it takes special precautions to determine pH in a hard cheese. The sensor in the ISFET probe is recessed and you will not get good contact with a dry cheese. If you attempt to rotate the probe to make contact it is possible to break off the probe. One possible alternative is to press a small piece of the cheese into the sensor of the probe. It then requires careful cleaning to remove the cheese residue.