

FOOD TECHNICAL SERVICES – PROJECT: PRODUCT SURFACE MOISTURE CONTROL MEAT AND SEAWEED

The Issue

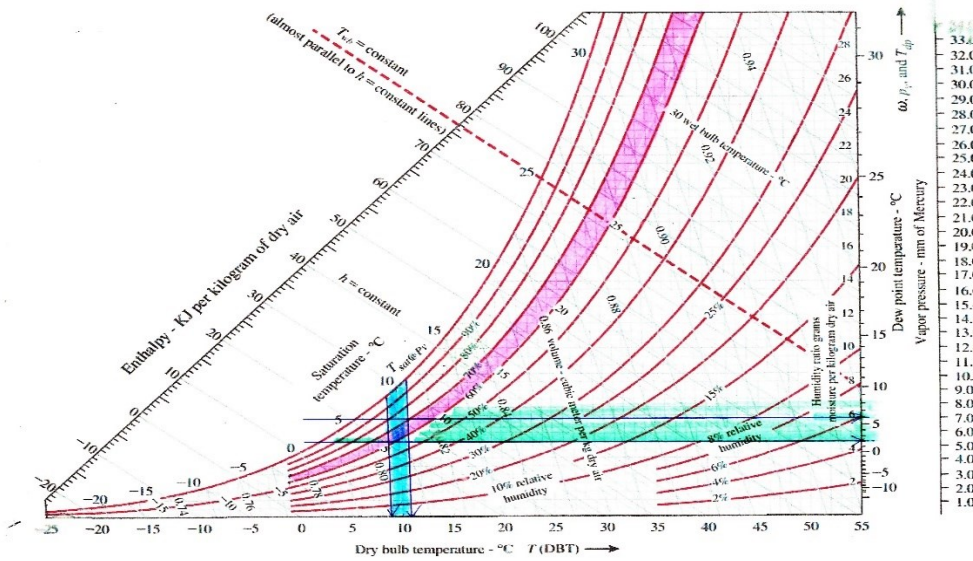
A cured meats manufacturer had been experiencing condensation problems on product surfaces prior to and after final skin packing; customer complaints & microbe counts had risen & were thought to be related. The process involved part processed (packed frozen unsliced cuts) being routinely defrosted then transferred to a "de-pack - slicing - re-pack" area (which was controlled at 9-11°C).

The solution

After chat on the phone re: options on controlling microbe/moistures - measurements were taken:

- Water activities (equilibrium relative humidity) of the cured meats
- Ambient air humidity and temperature ranges of the de-pack/re-pack area
- Surface temperatures of defrosted product after de-pack and prior to re-pack.

Armed with the data & a basic Psychrometric chart we could see that surface condensation and microbe growth were inevitable but probably manageable.



Action and Results:

With dry bulb air temperatures restricted to 9-11°C (blue on chart), and air humidity within 60-70% (pink on chart) - the business would be able to eliminate surface condensation if product surfaces were kept above the max dewpoint (ie 5.5°C - top of green band). As 6-8°C was acceptable for each of: slicing yield, product safety & staff comfort - we'd very easily/quickly found a very low cost solution.



Other example: Similar techniques were used for a dried seaweed manufacturer who'd requested advice on controlling condensation inside sealed loose packs of product during cold storage/transit.

