



Is measuring vent temperature accurate?

Day-old chicks cannot control their body temperature, and during the time they spend in the hatchery, are sometimes exposed to temperatures which are uncomfortable, or even actively harmful.

Aviagen advises that day-old chicks be held in conditions which allow them to maintain a vent temperature between 103 and 105 F (39.4 and 40.6 C).

Vent temperature is measured using a Braun ThermoScan thermometer, holding the sensor close to the skin of the vent. It has been suggested that measuring rectal temperature by inserting a paediatric rectal thermometer about 0.5cm into the chick's vent is more accurate than measuring vent temperature.

Unfortunately, it also has the potential to damage the gut wall of the chick during insertion.

Fig. 1 shows the relationship between the rectal and vent temperature of chicks which were held in a range of different thermal environments, set up to induce vent temperatures between 99 and 107.5 F (37.2 and 41.9 C).

It shows a tight relationship between the two measurements, with an R2 value of 0.865 (the closer the R2 value is to 1.00, the stronger the relationship between the variables), indicating that the vent temperature is an accurate measure of body temperature in the day-old chick.

To get the best accuracy when checking vent temperature, take the measurements where the chicks have been held, because their body temperature will adjust to a new environment quite quickly.

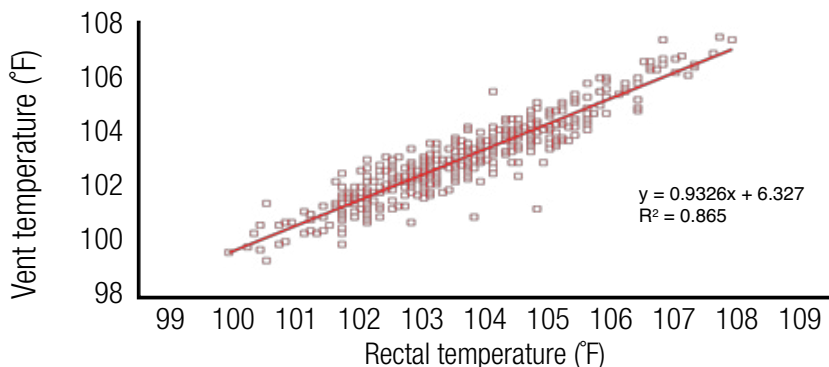


Figure 1 Relationship between rectal and vent temperature.



Is measuring vent temperature accurate? *Continued*

To measure vent temperature, ensure the thermometer has a clean tip cover, pick a chick up and hold it so that you can see the vent, position the chick's rump towards you and gently push the rump upwards so that the vent is exposed, rather than covered with down (Fig. 2).

Shield the chick from any drafts with your body while measuring, and ensure that the tip of the thermometer only touches bare skin. Any chicks which have a wet vent should be dried, or a different chick should be chosen for measurement.

The vent temperature measurement is the preferred method, being just as accurate and safer for the chick. Unfortunately, it is only really suitable for chicks in the hatchery – once they start to eat, drink and grow the vents are too wet to give an accurate result.

However, in the hatchery, the measurement is an invaluable tool for checking a room or holding area for hot and cold spots, before taking corrective action as necessary. Your chicks will be more comfortable and resilient as a result.



Figure 2 Measuring the vent temperature of a day-old chick.