



## Beat the Heat

### Summary of pelleting studies on OptiPhos® Plus CT and G, Axtra® Phy TPT2 and Quantum® Blue in Europe and USA

#### Trial description

##### 1 Set-up

- **Location:**
  - OptiPhos® Plus G and CT: **20 trials** in total, 14 trials in Europe and 6 in the USA conducted at 5 different trial locations in Europe and 5 different trial locations in USA.
  - Axtra® Phy TPT2: 5 trials of which 4 in Europe and 1 in the USA (all different trials locations)
  - Quantum® Blue: 7 trials of which 6 in Europe and 1 in the USA (5 different trial locations)
- **Trial period:** 2017 - 2019
- **Pelleting parameters:**
  - Conditioning time: ranging from 15 to 75 sec
  - Pellet diameter: ranging from 3 to 4.5 mm
  - Pelleting temperatures ranging from 75 °C to 95 °C

##### 2 Treatments

- Control feed supplemented with all phytases dosed to reach 1000 - 2000 FTU/kg

##### 3 Measurements

- Recovery = (Phytase in supplemented pellet – phytase in blank pellet)/(phytase in supplemented mash – phytase in blank mash) x 100 %

#### Results

- All data were plotted on a graph and the best fitting curve was drawn either as recovery or as percentage of label claim (i.e. taking into account overage is present to compensate for losses) (Fig. 1A and B: all best fits were linear except for OptiPhos® Plus G which was polynomial of the second order).
- OptiPhos® Plus CT and OptiPhos® Plus G are heat stable until at least 85 °C. At temperatures above 85 °C, OptiPhos® Plus CT has a higher thermostability than OptiPhos® Plus G, and can be used **at up to 90°C** and even 95 °C without major losses.
- OptiPhos® G and CT are much more heat stable than Quantum® Blue and Axtra® Phy TPT2.

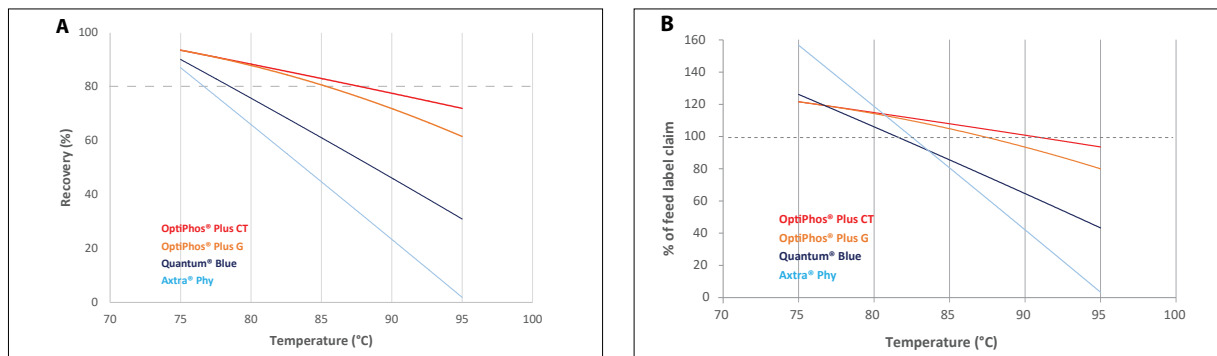


Fig. 10: Average recovery of OptiPhos® Plus CT and G versus Quantum® Blue and Axtra® Phy TPT2

#### Conclusion

- OptiPhos® Plus CT and OptiPhos® Plus G are heat stable until at least 85°, while OptiPhos® Plus CT can be used up to 95 °C without major losses.
- Quantum® Blue and Axtra® Phy TPT2 are much less heat stable than OptiPhos® Plus CT or G.