



**ABSTRACT**  
**ID:** 10940



**Mr.** Iltud Madec  
**Academic Degree** Dr.  
**Country** France  
**e-mail** imadec@pherosynthese.com

**Title** Effects of a semiochemical analogue on meat quality of twelve weeks old Label broilers (preliminary results)  
**Authors** I. MADEC\*, J.F. GABARROU, A. BOLLARD and P. PAGEAT  
**Faculty, Department** Pherosynthese, le Rieu Neuf – 84490 Saint Saturnin Apt, France

**Abstract Text**

Pale, soft, exudative (PSE) meat has been related in poultry. These meats show low water-holding capacity, bad textural properties and reduced protein extractability (Tankson et al., 2001). A relationship exists between colour, pH and water holding capacity (Fletcher, 1999). Mallia et al (1998) reported dark firm and dry (DFD) carcasses in broilers. Stress in poultry has severe consequences on the final product quality (Fletcher, 2002). In aves, scent glands are encountered in the uropygial gland (Bohnet et al, 1991). In this gland, a secretion has been identified in laying hens with chicks. We hypothesized that this secretion (Mother Hen Uropygial Secretion or MHUS) may influence chickens reaction to stress. From our results, the utilization of an analogue (MHUS Analogue or MHUSA) of this secretion influenced some meat quality parameters. We studied the meat characteristics of 1% of 8800 12 weeks old broilers. These animals were bred in two similar buildings. On a first batch building 1 received a placebo (P) and building 2 the semiochemical (S). Following a cross over design, building 1 was perfused by S and building 2 by P for the second batch (same season, 12 months later). Carcass Weights (CW) showed no significant differences between treatments (S>P, p=0.10). Filet Weights (FW) were higher for the S group both at 24 hours (p<0.05) and 6 days post mortem (p<0.05). We found a strong correlation between FW and CW ( $R^2=0.83$  and  $R^2=0.82$  for S and P, respectively). No correlation between abdominal fat and CW or between abdominal fat and FW has been found. There was no significant difference concerning abdominal fat. From day 1 to day 6 post mortem, males filets from S group lost more water compared to P ( $5.73\% \pm 1.75$  vs  $4.81\% \pm 1.38$ , p<0.05), whereas we observed the opposite for females ( $5.74\% \pm 1.67$  vs  $8.14\% \pm 3.98$ , for S and P, respectively, p<0.05). After a cooking procedure, sample from S group were less yellow as shown by b\* value (CIELAB procedure,  $5.27 \pm 1.43$  vs  $5.99 \pm 2.58$ , p<0.05). Filets from S group showed lower pH variations from day 1 to day 6 ( $-0.112 \pm 0.18$  for S vs  $-0.045 \pm 0.13$  for P, p<0.05). We conclude that MHUSA has an influence on filet quality (weights, pH variation, water loss and colour). Thus, constant exposure to MHUSA enhances growth without decreasing meat quality.

|                 |                     |   |
|-----------------|---------------------|---|
| <b>Category</b> | <b>Presentation</b> | <b>ORAL PRESENTATION</b>                            |
| <b>M.5.</b>     | <b>Keywords</b>     | <b>semiochemical; MHUSA; broilers; meat quality</b> |

