QUALITY ASSESSMENT FORM

Title of the study:

STUDY ON STATE OF PLAY OF PROCESSING TECHNOLOGIES AND THE ABSORPTION OF WATER IN POULTRYMEAT

DG/Unit: DG AGRI, Unit G3

- Official(s) managing the study: Martin Szentivany

Contractor: LGC Limited

Assessment carried out by:

- Steering group with the active participation from DG AGRI units G.3 (exC.3) and D.2, JRC F.4 in Geel, DG SANTE units G.4 and G.5.

Date of the Quality Assessment: January 2017

(1) RELEVANCE

Does the evaluation respond to information needs, in particular as expressed in the terms of references?

SCORING	Poor	Satisfactory	Good	Very Good	Excellent
				X	

Arguments for scoring:

As requested by the terms of reference, the study delivered a comprehensive and reliable description of the current EU industrial processing systems for chickens focusing on the processes where water is used. For the relevant chilling methods used within the EU, it assessed the influence of water uptake on the calculation of the water/protein ratios according to the requirements set out in Regulation (EC) No 543/2008.

(2) APPROPRIATE DESIGN

Is the design of the evaluation adequate for obtaining the results needed to answer the evaluation questions?

SCORING	Poor	Satisfactory	Good	Very Good	Excellent
				X	

Arguments for scoring:

The methodology design is very appropriate for addressing the study objectives. The methodology combined several approaches.

To gather information on EU industrial processing systems five independent sources of information were used:

a) Online survey of slaughterhouses in EU Member States.
b) Telephone interviews with the national member organizations of Association of Poultry Processors and Poultry Trade in the EU countries (AVEC) in the top seven poultry producing Member States.
c) Face-to-face interviews with the main poultry processing equipment manufacturers.
d) Literature review to identify the EU poultry processing systems and the use of processing equipment and its impact on water content in poultry.
e) Commission's annual control data for monitoring water in poultrymeat to assess use of different chilling methods and trends.

Sampling plans for collection and analysis of chicken carcases and cuts were devised to ensure that the samples taken were representative of current EU poultry processing practice.

a) Samples were collected from 15 poultry processing plants located in six of the top seven EU poultry producing countries, accounting for more than 60% of EU poultry production (UK, France, Germany, Spain, Italy and the Netherlands).
b) Six National Reference Laboratories for monitoring water content in poultrymeat (NRLs) undertook sampling and analysed samples for this study in accordance with the requirements of Regulation (EC) 543/2008 (chemical test and thaw loss test).
c) The samples for chemical testing were transported by a specialist courier using thermally insulated containers to LGC where all samples were homogenised. The homogenised samples were then transported by the same means to the six NRLs for chemical testing.
d) The samples for thaw loss testing were transported by the same means to the German NRL, which analysed all samples for thaw loss.

All the results from chemical and thaw loss testing were returned to LGC for statistical analysis and interpretation.

The combination of these approaches allowed addressing the study objectives in a comprehensive and sound way.

(3) RELIABLE DATA

Are data collected adequate for their intended use and have their reliability been ascertained?

SCORING	Poor	Satisfactory	Good	Very Good	Excellent
			X		

Arguments for scoring:

Overall, the data collection was planned in great detail (see above under point 2). However, the contractor faced a number of difficulties, especially during the sampling phase:

a) **Samples were collected from 15 poultry processing plants located in six of the top seven EU poultry producing countries** (UK, France, Germany, Spain, Italy and the Netherlands). Originally, the samples were supposed to be collected also from Poland, however, access to Polish slaughterhouses could not be secured within the timescale of this project despite efforts of the contractor to gain access through AVEC national member organisation, Polish National Reference Laboratory and other contacts.

b) **Limited availability of commercial samples.** Some plants were not commercially producing either the portion required (Breast / Leg / Carcase) or by the preservation method (cold state: fresh/frozen) required. The project team worked with plant staff to obtain the required samples i.e. the samples required for the project were produced mimicking commercial practice as closely as possible. Yet, the samples obtained in this manner may not be exactly the same as their commercially produced counterparts. Samples produced in this manner represented 15% of samples for chemical testing and 60% of samples for thaw loss testing.

c) **Lower number of samples to be analysed by chemical testing.** Despite making adaptations to obtain the required samples from plants, it was not always possible to do so which resulted in the collection of 150 of the planned 180 samples for chemical testing.

d) **Low number of processing plants for sample analysis by thaw loss.** Because thaw loss samples were not taken from 5 processing plants as per the agreed sampling plan, some apparent differences in thaw loss among chilling methods might be partially attributable to individual processing plant treatments.

All these issues related to sample collection are clearly mentioned in the study report and the subsequent limitations are properly reflected when formulating conclusions of the study.

(4) SOUND ANALYSIS

Are data systematically analysed to answer evaluation questions and cover other information needs in a valid manner?

SCORING	Poor	Satisfactory	Good	Very Good	Excellent
				X	

Arguments for scoring:

The sample testing and analysis of the results is very well developed and consists of a highly professional utilisation of practical and laboratorial skills.

a) All samples for chemical testing were homogenised under the same conditions (by the main contractor) so that difference in the results obtained could be attributed, as far as possible, to differences due to the chilling method alone.

b) Samples for chemical testing were divided up between the six NRLs so that they were each analysing a representative number of samples for the parameters being studied in accordance with the requirements of Annex VII and VII of Regulation (EC) 543/2008. A detailed analysis protocol was prepared and sent to the NRLs before sample analysis commenced to avoid as much as potential laboratory bias.

c) All samples for thaw loss testing were analysed by the German NRL for thaw loss (drip test) in accordance with Annex VI of Regulation (EC) of 543/2008.

d) All the results from chemical and thaw loss testing were returned to the main contractor - LGC - for statistical analysis and interpretation by a highly professional statistics team.

(5) CREDIBLE FINDINGS

Do findings follow logically from and are justified by, the data/information analysis and interpretations based on pre-established criteria and rational?

SCORING	Poor	Satisfactory	Good	Very Good	Excellent
				X	

Arguments for scoring:

The findings are supported by the evidence provided through the analysis and by the data collected during the descriptive part of the study.

(6) VALID CONCLUSIONS

Are conclusions non-biased and fully based on findings?

SCORING	Poor	Satisfactory	Good	Very Good	Excellent
				X	

Arguments for scoring:

The conclusions are substantiated by findings, which in turn were drawn from the sound analysis. They are balanced and prudent clearly outlining limitations caused by data constraints.

(7) HELPFUL RECOMMENDATIONS

Are areas needing improvements identified in coherence with the conclusions? Are the suggested options realistic and impartial?

SCORING	Poor	Satisfactory	Good	Very Good	Excellent

Arguments for scoring:

The study does not provide recommendations however the conclusions can be considered in potential review of legal limits of technically unavoidable water content in poultrymeat.

(8) CLARITY

Is the report well structured, balanced and written in an understandable manner?

SCORING	Poor	Satisfactory	Good	Very Good	Excellent
			X		

Arguments for scoring:

The report is well structured and balanced, following the elements required by the terms of reference. Despite highly technical nature of the subject, the overall clarity of the report is good.

OVERALL ASSESSMENT OF THE FINAL EVALUATION REPORT

Is the overall quality of the report adequate, in particular:

- Does the evaluation fulfil contractual conditions?

Clearly and fully.

- Are the findings and conclusions of the report reliable, and are there any specific limitations to their validity and completeness?

The findings and conclusions of the report are reliable and their limitations clearly outlined.

- Is the information in the report potentially useful for designing intervention, setting priorities, allocating resources or improving interventions?

The study provides a reference for further reflection on legal limits for technically unavoidable water content in poultrymeat, as provided in Commission Regulation (EC) No 543/2008.