

**Changes to legislation:** There are currently no known outstanding effects for the Commission Decision of 15 April 2004 authorising methods for grading pig carcasses in the United Kingdom (notified under document number C(2004) 1340) (Only the English text is authentic) (2004/370/EC), PART 5. (See end of Document for details)

## ANNEX I

## METHODS FOR GRADING PIG CARCASSES IN THE UNITED KINGDOM (EXCLUDING NORTHERN IRELAND)

## PART 5

**Fully automatic ultrasonic carcass grading (Autofom)**

1. Pig carcass grading shall be carried out using the apparatus termed Autofom (Fully automatic ultrasonic carcass grading).
2. The apparatus shall be equipped with 16 16,2 MHz ultrasonic transducers (Krautkrämer, SFK 2 NP), with an operating distance between transducers of 25 mm.

The ultrasonic data shall comprise measurements of back-fat thickness and muscle thickness.

The results of the measurements are converted into estimated lean meat content using a computer.

3. The carcass's lean meat content shall be calculated on the basis of 108 measurement points using the following formula:

$$\begin{aligned} \hat{y} = & 64,56076 - 0,011867x_1 - 0,037750x_2 - 0,013357x_3 - 0,011163x_4 \\ & - 0,021255x_5 - 0,006461x_6 - 0,016539x_7 - 0,026134x_8 - 0,011734x_9 - \\ & 0,010533x_{10} - 0,021250x_{11} - 0,011591x_{12} - 0,023174x_{13} - 0,035567x_{14} \\ & - 0,012220x_{15} - 0,010566x_{16} - 0,024556x_{17} - 0,015644x_{18} - \\ & 0,012601x_{19} - 0,024600x_{20} - 0,011233x_{21} - 0,010434x_{22} - 0,022287x_{23} - \\ & 0,015566x_{24} + 0,003953x_{25} + 0,004604x_{26} + 0,004438x_{27} + 0,004865x_{28} - \\ & 0,035444x_{29} - 0,022043x_{30} - 0,035690x_{31} - 0,043143x_{32} - 0,035588x_{33} - \\ & 0,034093x_{34} - 0,037165x_{35} - 0,027871x_{36} - 0,029070x_{37} - 0,028929x_{38} - \\ & 0,028884x_{39} - 0,028174x_{40} - 0,023148x_{41} - 0,025299x_{42} - 0,035816x_{43} - \\ & 0,044413x_{44} - 0,044408x_{45} - 0,034309x_{46} - 0,029252x_{47} - 0,018420x_{48} - \\ & 0,008756x_{49} - 0,012405x_{50} - 0,016834x_{51} - 0,019488x_{52} - 0,021442x_{53} - \\ & 0,023237x_{54} - 0,022466x_{55} - 0,033462x_{56} - 0,031548x_{57} - 0,031020x_{58} - 0,030049x_{59} \\ & - 0,029518x_{60} - 0,030063x_{61} - 0,049797x_{62} - 0,050145x_{63} - 0,049625x_{64} - \\ & 0,049249x_{65} - 0,047528x_{66} - 0,045669x_{67} - 0,026058x_{68} - 0,025250x_{69} - 0,023297x_{70} \\ & - 0,022976x_{71} - 0,022032x_{72} - 0,022040x_{73} - 0,015719x_{74} - 0,028318x_{75} - \\ & 0,017586x_{76} + 0,007988x_{77} + 0,008649x_{78} + 0,009642x_{79} + 0,009355x_{80} + 0,008768x_{81} + 0,006580x_{82} + \end{aligned}$$

where:

$$\hat{y} = \text{the estimated lean meat content of the carcass,}$$

$x_1, x_2, \dots, x_{108}$  are the variables measured by Autofom.

4. Descriptions of the measurement points and the statistical method can be found in Part II of the United Kingdom protocol forwarded to the Commission in accordance with Article 3(3) of Regulation (EEC) No 2967/85.

The formula shall be valid for carcasses weighing between 30 and 120 kilograms.

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