



MINISTRY OF FAMILY
AND CONSUMER AFFAIRS

Danish Veterinary
and Food Administration

Added water in immersed chilled
frozen chickens.

Peter Molander



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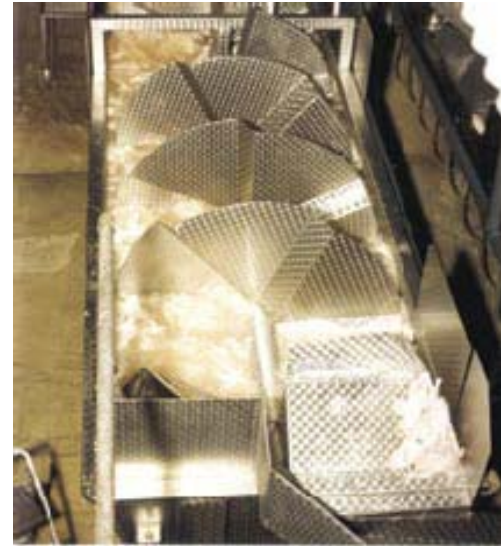
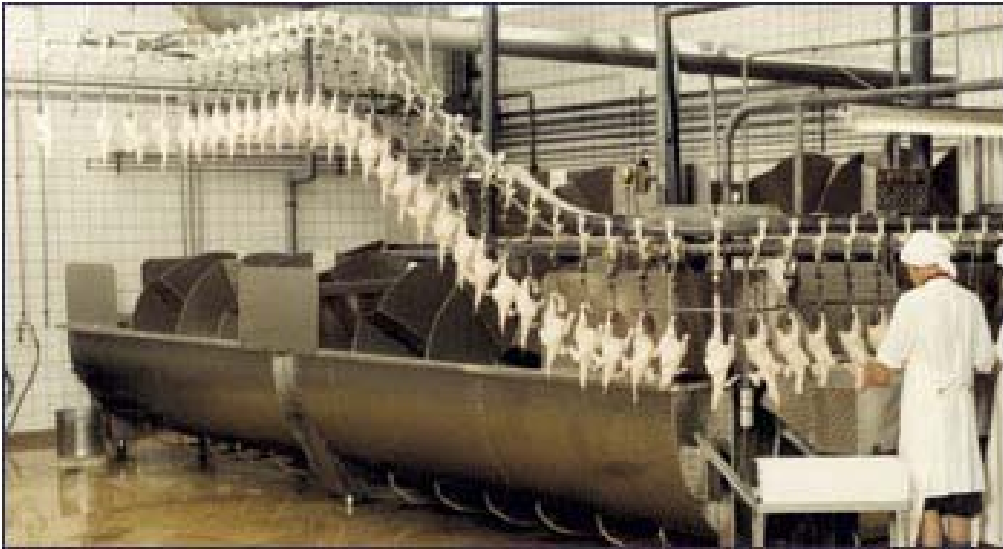
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- **“History”**
- **Sample preparation/Analyses**



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(Photo: www.lincofood.com)



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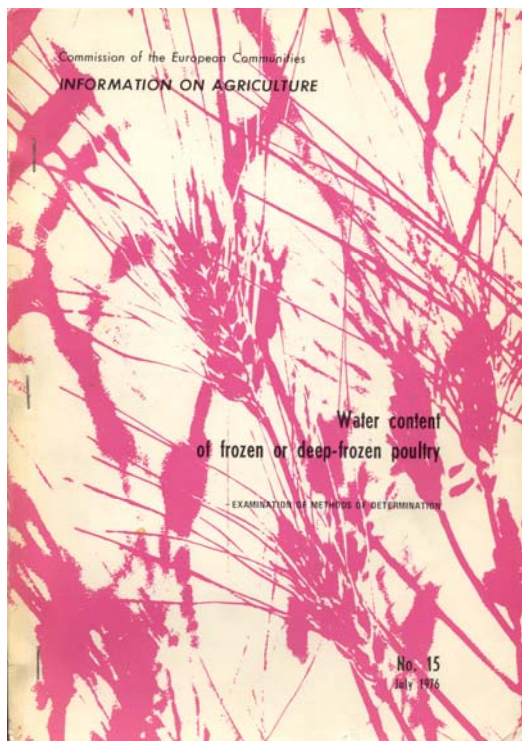


(Photo: www.skaginn.is)



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Water content of frozen or deep-frozen poultry.

Study No. 15, July 1976.

Belgium

Denmark

France

Germany

Ireland

Italy

The Nederland

United Kingdom



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Water content of frozen or deep-frozen poultry.

Study No. 15, July 1976.

Study results, chickens:

$$\text{Phys. water (g)} = 3,31 \times \text{Protein (g)} + 42 \text{ g}$$



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Council Regulation (EEC) No 2967/76 of 23. November 1976.

Immersed chilled chickens:

Maximum water (8% water uptake):

Max. water (g) = 3,82 x Protein (g) + 59 g

No 2 2076 Official Journal of the European Communities 28.11.76

COMMUNITY REGULATIONS (EEC) No 2967/76

of 23 November 1976
implementing Regulation (EEC) No 2967/76 concerning detailed rules for
implementing Regulation (EEC) No 2967/76 concerning certain marketing standards for
poultrymeat

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

having regard to the Treaty establishing the European
Economic Community,

having regard to Council Regulation (EEC) No 1831/64
of 22 July 1964 on certain marketing standards for poultry
meat, as amended by Regulation (EEC) No 1831/64
of 22 July 1964 and in particular Article 1(1)(b) thereof,

Whereas Council Regulation (EEC) No 1831/64,
as last amended by Regulation (EEC) No 1831/64
of 22 July 1964, requires, in order to ensure uniformity
in the poultrymeat sector,

Whereas, in the light of experience, certain detailed
marketing standards, such as certain presentation and
marking conditions, should be established, whereas it is
desirable to define the product "weight" in "weight" in
order to ensure accurate production;

Whereas, with a view to ensuring application of Regu-
lation (EEC) No 1831/64, the water handling and
marking should be defined in the presentation rules and
the special rules concerning the marketing of the
meat of poultry carcasses, carcasses, or presentation rules
and of special categories of carcasses and meat should be
defined;

Whereas, with a view to ensuring uniform application
of the rules, certain special marketing conditions
and presentation standards for the carcasses and meat
of the following nature should be established:

Whereas, in the light of Regulation (EEC) No 1831/64,
poultrymeat carcasses and meat may be indicated as to
be homogeneous in type in respect of origin of the
Member State in which marketing of the carcasses and meat
takes place, whereas such presentation should be indicated in
conformity with Council Regulation (EEC) No 1831/64
of 22 July 1964, as amended by Regulation (EEC) No 1831/64
of 22 July 1964, and in the presentation of the carcasses
and meat;

Whereas, in the light of Regulation (EEC) No 1831/64,
poultrymeat carcasses and meat may be indicated as to
be homogeneous in type in respect of origin of the
Member State in which marketing of the carcasses and meat
takes place, whereas such presentation should be indicated in
conformity with Council Regulation (EEC) No 1831/64
of 22 July 1964, as amended by Regulation (EEC) No 1831/64
of 22 July 1964, and in the presentation of the carcasses
and meat;

the Member States existing in the marketing presentation
and marketing of poultrymeat, in order to the greatest
extent possible, to be harmonized in Member States (1) in
order to facilitate the marketing of poultrymeat in
one area, the Member States of the Community or in all
other countries;

Whereas, in view of economic and technological develop-
ments, the use of presentation of poultrymeat, and
more particularly the use of carcasses, should be
facilitated in order to ensure uniformity in the
marketing of poultrymeat in one area, the Member States
of the Community or in all other countries;

Whereas, in order to ensure uniformity in the
marketing of poultrymeat, the presentation and
marking of carcasses and meat should be defined in
the presentation rules and the special rules concerning
the marketing of the carcasses and meat of poultry
carcasses, carcasses, or presentation rules and of
special categories of carcasses and meat;

Whereas, the marketing of poultrymeat from one
Member State to another Member State, and in particular
the marketing of poultrymeat from one Member State to
another Member State, should be facilitated in order to
ensure uniformity in the marketing of poultrymeat in
one area, the Member States of the Community or in all
other countries;

Whereas, in order to ensure uniformity in the
marketing of poultrymeat, the presentation and
marking of carcasses and meat should be defined in
the presentation rules and the special rules concerning
the marketing of the carcasses and meat of poultry
carcasses, carcasses, or presentation rules and of
special categories of carcasses and meat;

Whereas, in the light of Regulation (EEC) No 1831/64,
poultrymeat carcasses and meat may be indicated as to
be homogeneous in type in respect of origin of the
Member State in which marketing of the carcasses and meat
takes place, whereas such presentation should be indicated in
conformity with Council Regulation (EEC) No 1831/64
of 22 July 1964, as amended by Regulation (EEC) No 1831/64
of 22 July 1964, and in the presentation of the carcasses
and meat;

Whereas, in the light of Regulation (EEC) No 1831/64,
poultrymeat carcasses and meat may be indicated as to
be homogeneous in type in respect of origin of the
Member State in which marketing of the carcasses and meat
takes place, whereas such presentation should be indicated in
conformity with Council Regulation (EEC) No 1831/64
of 22 July 1964, as amended by Regulation (EEC) No 1831/64
of 22 July 1964, and in the presentation of the carcasses
and meat;



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Water content of frozen and deep-frozen poultry.

Report No. 117, January 1992.

Denmark

France

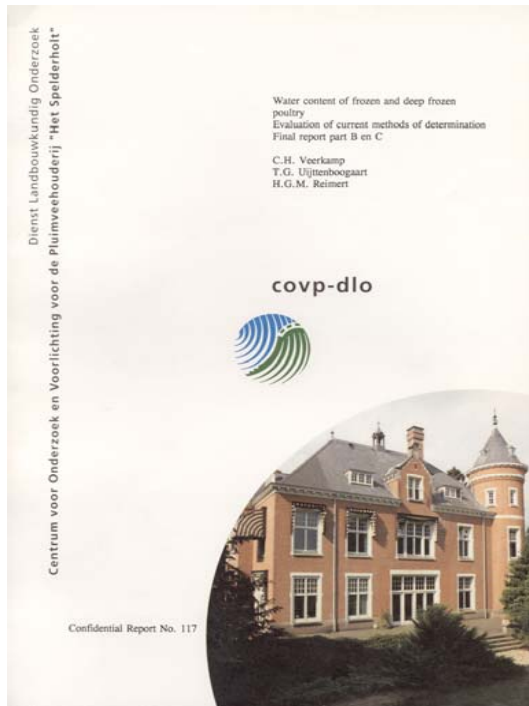
Germany

Greece

Spain

The Nederland

United Kingdom





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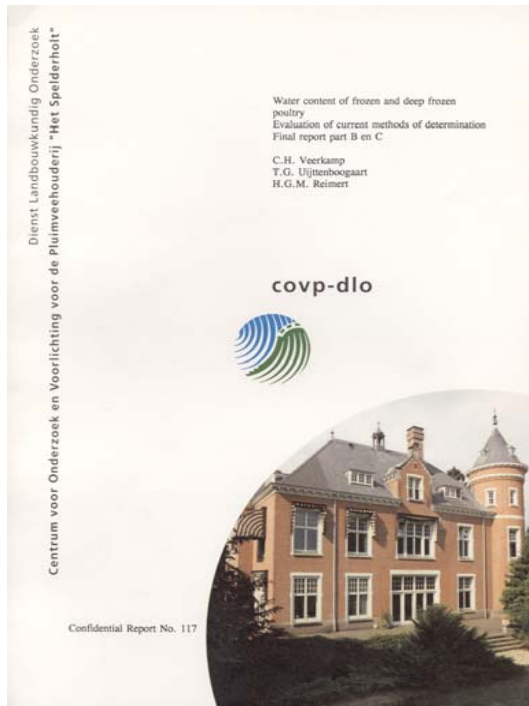
Danish Veterinary
and Food Administration

Water content of frozen and deep-frozen poultry.

Report No. 117, January 1992.

Study results, chickens:

$$\text{Phys. water (g)} = 3,43 \times \text{Protein (g)} + 55 \text{ g}$$





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Danish Veterinary
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Commission Regulation (EEC) No 2891/93. October 1993.

No L 287/8 Official Journal of the European Communities 28.10.93

COMMISSION REGULATION (EEC) No 2891/93

of 13 October 1993
amending Regulation (EEC) No 2608/92 concerning detailed rules for
implementing Regulation (EEC) No 2608/92 on structural animal marketing standards for
porkmeat

THE COMMISSION OF THE EUROPEAN COMMUNITIES,
having regard to the Treaty establishing the European
Economic Community,

having regard to Council Regulation (EEC) No 1831/84
of 20 June 1984 on semi-processing methods for pork
meatmeat, as amended by Regulation (EEC) No 1831/84,
as amended by Council Directive 90/269/EEC,

Whereas Commission Regulation (EEC) No 1291/92,
of 10 June 1992, amending Regulation (EEC) No 1831/84,
as amended by Council Directive 90/269/EEC, in
Article 10, paragraph 1, has to be amended;

Whereas, in the light of experience, certain definitions
concerning species, sex, certain processing and
curing conditions should be amended, whereas it is
desirable to delete the phrase "weight" in favour of
"water uptake" in order to ensure better protection;

Whereas, with a view to ensuring compliance with
Regulation (EEC) No 1831/84, the water uptake and
salt content should be defined in the processing rules and
the speed of curing concerning the rendering of the
use of protein content, fat content, of processing speed
and of curing temperature, the criteria and time should be
revised;

Whereas, with a view to ensuring compliance with
the rules, certain curing conditions, processing conditions
and processing methods for the national production of
the curing method should be specified;

Whereas, in the light of Regulation (EEC) No 1291/92,
provisions should be taken to ensure compliance with
the requirements in force in regard to the quality of the
meatmeat in which, in particular, the water uptake and
salt content should be specified by reference to
meatmeat with minimum moisture content of 70% and of
18 December 1993, in the application of the rules of
the Commission;

Whereas, in the light of Regulation (EEC) No 1291/92,
provisions should be taken to ensure compliance with
the requirements in force in regard to the quality of the
meatmeat in which, in particular, the water uptake and
salt content should be specified by reference to
meatmeat with minimum moisture content of 70% and of
18 December 1993, in the application of the rules of
the Commission;

the Member States, taking into account the scientific, technical
and economic aspects, to take into account the
possibilities of the Member States, in order to
facilitate the marketing of porkmeat of
one side, the Member States in the
other Member States;

Whereas, in view of economic and technological developments
concerning the production of porkmeat, and
given that the water uptake is of considerable importance in the
marketing of meat, it is desirable to specify the
water uptake and salt content in order to ensure
the quality of the meat, whereas the water uptake
and salt content should be defined in the
processing rules and the speed of curing
concerning the rendering of the use of protein
content, fat content, of processing speed and
of curing temperature, the criteria and time
should be revised;

Whereas, with a view to ensuring compliance with
the rules, certain curing conditions, processing conditions
and processing methods for the national production of
the curing method should be specified;

Whereas, in the light of Regulation (EEC) No 1291/92,
provisions should be taken to ensure compliance with
the requirements in force in regard to the quality of the
meatmeat in which, in particular, the water uptake and
salt content should be specified by reference to
meatmeat with minimum moisture content of 70% and of
18 December 1993, in the application of the rules of
the Commission;

Whereas, in the light of Regulation (EEC) No 1291/92,
provisions should be taken to ensure compliance with
the requirements in force in regard to the quality of the
meatmeat in which, in particular, the water uptake and
salt content should be specified by reference to
meatmeat with minimum moisture content of 70% and of
18 December 1993, in the application of the rules of
the Commission;

Maximum water (7% water uptake):

Max. water (g) = 3,93 x Protein (g) + 42 g



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Report of the EC study Physiological water in poultry parts and control methods for extraneous water.

Report No. 151, May 1993.

Denmark

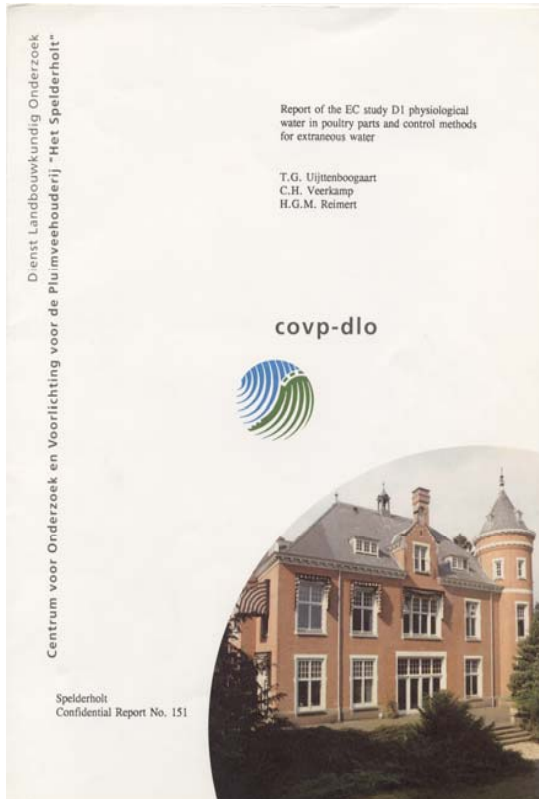
France

Germany

Spain

The Netherland

United Kingdom





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Report of the EC study Physiological water in poultry parts and control methods for extraneous water.

Report No. 151, May 1993.



Water/Protein ratio (physiological water)

Fillet	Drumstick	Thigh	Leg (anatomical)	Quarter (leg+back)
3.19	3.78	3.77	3.77	3.78



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Commission Regulation (EEC) No 1072/2000.

October 2000.

20.5.2000 EN Official Journal of the European Communities L 119/21

COMMISSION REGULATION (EC) No 1072/2000
of 19 May 2000

amending Regulation (EEC) No 1538/91 introducing detailed rules for implementing Regulation
(EEC) No 1906/90 on certain marketing standards for poultrymeat

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European
Community,

Having regard to Council Regulation (EEC) No 1906/90 of 26
June 1990 on certain marketing standards for poultrymeat (*),
as last amended by Regulation (EC) No 1101/98 (**), and in
particular Articles 7 and 9 thereof,

Whereas:

(1) Commission Regulation (EEC) No 1538/91 (**), as last
amended by Regulation (EC) No 1000/96 (***), lays down
the detailed rules for implementing marketing standards in
the poultrymeat sector;

(2) By Regulation (EC) No 1101/98 the scope of Regulation
(EEC) No 1906/90 was extended to cover the control of
water content of poultry cuts. It is therefore necessary to
lay down the detailed provisions for such controls which
are similar to those for whole frozen and quick-frozen
carcasses and which include the list of products
concerned and the appropriate method of control;

(3) The provisions on water control should also be adapted
regarding national measures for checks at all stages of
marketing and to update the list of reference labora-
tories;

(4) The age of slaughter for young geese, in which the
stomach is not yet ossified must be laid down in the
context of the indication of particular types of farming;

(5) The measures provided for in this Regulation are in
accordance with the opinion of the Committee for Poul-
trymeat and Eggs;

HAS ADOPTED THIS REGULATION:

Article 1

Regulation (EEC) No 1538/91 is amended as follows:

(*) [EU L 177, 6.7.1990, p. 1.](#)
(**) [EU L 157, 30.5.1998, p. 12.](#)
(***) [EU L 140, 7.6.1996, p. 11.](#)
(****) [EU L 134, 5.6.1996, p. 9.](#)

1. The following point (a) is added in Article 1(2):

'(a) deboned turkey leg meat: turkey thighs and/or drum-
sticks, deboned, i.e. without femur, tibia and fibula,
whole, diced or cut into strips;

2. Article 14(a) is amended as follows:

— in paragraph 3 first subparagraph, 'four' is replaced by
'eight';

— paragraph 13 is replaced by the following:

'13. The Member States shall adopt the practical
measures for the checks provided for in this Article at all
stages of marketing including checks of imports from
third countries at the time of customs clearance in
accordance with Annexes V and VI. They shall inform
the other Member States and the Commission before 1
September 2000 of these measures. Any relevant
changes shall be communicated immediately to the
other Member States and to the Commission.'

3. The following Article 14(b) is inserted:

'Article 14b

1. The following fresh, frozen and quick-frozen poultry
cuts may be marketed by way of business or trade within
the Community only if the water content does not exceed
the technically unavoidable values determined by the
method of analysis described in Annex VIa (chemical
method):

(a) chicken breast fillet, with or without wishbone, without
skin;

(b) chicken breast, with skin;

(c) chicken thighs, drumsticks, legs, legs with a portion of
the back, leg-quarters, with skin;

(d) turkey breast fillet, without skin;

(e) turkey breast, with skin;

(f) turkey thighs, drumsticks, legs, with skin;

(g) deboned turkey leg meat, without skin.

2. The competent authorities designated by each
Member State shall ensure that the slaughterhouses and
cutting plants whether or not attached to slaughterhouses
adopt all measures necessary to comply with the provisions
of paragraph 1 and in particular that:

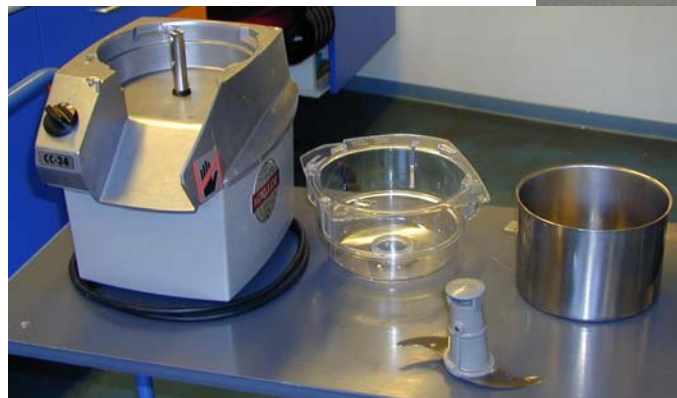
Water/Protein ratio (6% water uptake)		
Chicken Breast Fillet; without skin	Chicken Breast With skin	Drumstick, Leg, Quarters; with skin
3.40	3.60	4.30



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Homogenization equipment.





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Band saw.



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Mincing machine.



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Mincing machine.

Power: 1.3 KW



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Cutter.

Slow speed: 2.2 KW

Fast speed: 3.0 KW



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Cutter.

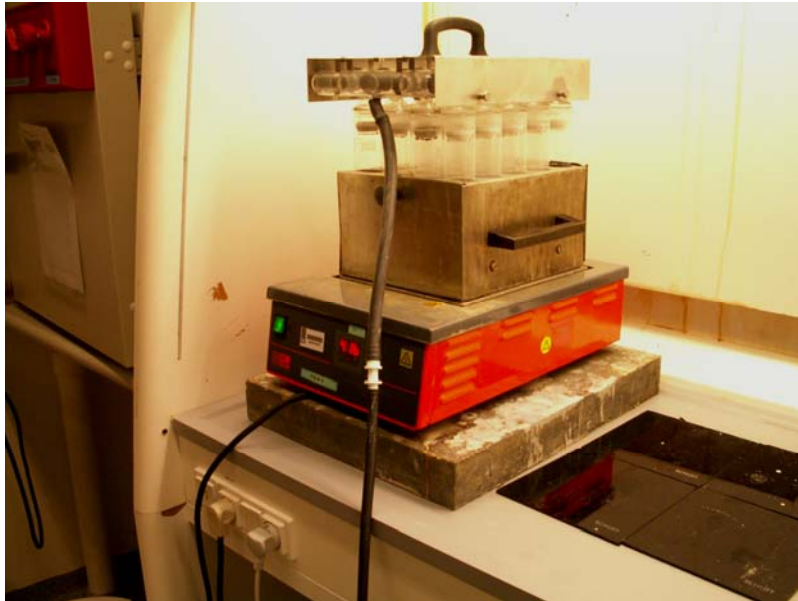
Power: 1.0 KW



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Protein analysis





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Water analysis





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The future?

Chemical analysis at the processing plant?



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BRAN+LUEBBE

Infracal 2000

PERTEN

DA7200

