STATUTORY INSTRUMENTS

1964 No. 1253 (S. 84)

FOOD AND DRUGS

COMPOSITION—SCOTLAND

The Mineral Hydrocarbons in Food (Scotland) Regulations 1964

Made - - - -	31*st July* 1964
Laid before Parliament	10*th August* 1964
Coming into Operation	11*th August* 1964

In exercise of the powers conferred on me by sections 4 and 56 of the Food and Drugs (Scotland) Act 1956(a) and of all other powers enabling me in that behalf, and after consultation with such organisations as appear to me to be representative of interests substantially affected by these regulations, I hereby make the following regulations:—

Citation and commencement

1. These regulations may be cited as the Mineral Hydrocarbons in Food (Scotland) Regulations 1964 and shall come into operation on 11th August 1964.

Interpretation

2.—(1) In these regulations, unless the context otherwise requires—

" the Act " means the Food and Drugs (Scotland) Act 1956 ;

" chewing compound " means chewing gum and other products of a like nature and use ;

" dried fruit " means prunes, currants, sultanas and raisins ;

" food " means food intended for sale for human consumption ;

" human consumption " includes use in the preparation of food for human consumption ;

" mineral hydrocarbon " means any hydrocarbon product, whether liquid, semi-liquid or solid, derived from any substance of mineral origin and includes liquid paraffins, white oils, petroleum jellies, hard paraffins and microcrystalline waxes ;

" mineral oil " means any hydrocarbon product, whether liquid, semi-liquid or solid, derived from any substance of mineral origin and includes liquid paraffins, white oils, petroleum jellies and hard paraffins ;

" sell " includes offer or expose for sale or have in possession for sale ;

and " sale " shall be construed accordingly ;

and other expressions have the same meaning as in the Act.

(2) The Interpretation Act 1889(b) shall apply for the interpretation of these regulations as it applies for the interpretation of an Act of Parliament.

(a) 4 & 5 Eliz. 2. c. 30. (b) 52 & 53 Vict. c. 63.

Enforcement

3.—(1) The local authority of any area shall, subject to the provisions of the next following paragraph, enforce and execute the provisions of these regulations within their area.

(2) Where any part of the area of a local authority lies within the area of a port local authority such of the functions of the local authority under these regulations in relation to any food imported into that part shall, in so far as these functions fall to be exercised by the port local authority by virtue of any order made under section 172 of the Public Health (Scotland) Act 1897(**a**), be exercised by that port local authority.

(3) In this regulation " local authority " means the council of a county or of a large burgh within the meaning of the Local Government (Scotland) Act 1947(**b**); and any small burgh within the meaning of that Act shall, for the purposes of these regulations, be included in the county in which it is situated; and " port local authority " includes a joint port local authority.

Exemptions

4.—(1) Regulation 6 of these regulations shall not apply in relation to—

(*a*) any dried fruit containing not more than 0·5 part by weight of mineral hydrocarbon per 100 parts by weight of dried fruit;

(*b*) any citrus fruit containing not more than 0·1 part by weight of mineral hydrocarbon per 100 parts by weight of citrus fruit;

(*c*) any sugar confectionery containing mineral hydrocarbon by reason of the use of mineral hydrocarbon as a polishing or glazing agent for confectionery if such confectionery contains by reason thereof not more than 0·2 part by weight of mineral hydrocarbon per 100 parts by weight of such confectionery;

(*d*) any food containing mineral hydrocarbon—

(i) by reason of the use in the composition of such food of dried fruit, citrus fruit or sugar confectionery, or any one or more of these commodities, containing mineral hydrocarbon not in excess of the relevant quantities permitted in accordance with sub-paragraphs (*a*), (*b*) and (*c*) of this paragraph;

(ii) by reason not of the inclusion of mineral hydrocarbon as an ingredient in such food but because of the use of mineral hydrocarbon as a lubricant or greasing agent on some surface with which such food has necessarily to come into contact during the course of preparation if such food contains by reason thereof not more than 0·2 part by weight of mineral hydrocarbon per 100 parts by weight of the food;

(*e*) any chewing compound which contains no more than 60 parts by weight of paraffin or microcrystalline wax per 100 parts by weight of chewing compound and otherwise contains no mineral hydrocarbon;

(*f*) any whole pressed cheese or part thereof containing mineral hydrocarbon by reason of the use of mineral hydrocarbon on the rind;

(*g*) any eggs, laid by domestic fowls or domestic ducks, which contain mineral hydrocarbon by reason of their having been subjected to a process of preservation consisting of being dipped in, sprayed with or otherwise treated with mineral hydrocarbon and which before sale or exposure for sale are required (by section 3 of the Agricultural Produce

(**a**) 60 & 61 Vict. c. 38. (**b**) 10 & 11 Geo. 6. c. 43.

(Grading and Marking) Act 1928(a) and orders thereunder(b)) to be marked on the shell with the word "SEALED";

(*h*) any food intended for exportation to any place outside the United Kingdom.

(2) Any reference in paragraph (1) of this regulation to mineral hydrocarbon means liquid mineral hydrocarbon or semi-liquid mineral hydrocarbon, or paraffin or microcrystalline wax, which complies with the specification therefor set forth respectively in paragraphs 1, 2 and 3 of Part I of Schedule 1 to these regulations or a mixture of such liquid, or semi-liquid mineral hydrocarbons, or paraffin or microcrystalline wax; and the reference in paragraph 1(*e*) of this regulation to paraffin or microcrystalline wax means paraffin or microcrystalline wax which complies with the specifications set forth in paragraphs 3 and 4 of the said Part of the said Schedule.

(3) An exemption provided for in paragraph (1) of this regulation shall not apply if the food contains any mineral hydrocarbon other than mineral hydrocarbon of a kind defined in relation to that food in paragraph (2) of this regulation.

Continuation of the Mineral Oil in Food Order 1949

5. Until the Mineral Oil in Food Order 1949(c) as amended(d) ceases to have effect in accordance with regulation 10 hereof, regulation 6 of these regulations shall not apply in relation to—

(*a*) the use of any mineral oil in the composition or preparation of any food in accordance with the provisions of that order as amended;

(*b*) the sale of any food containing mineral oil in accordance with such provisions.

Prohibition of mineral hydrocarbon in food

6. Subject to the provisions of these regulations—

(*a*) no person shall use or permit to be used any mineral hydrocarbon in the composition or preparation of any food;

(*b*) no person shall sell any food containing any mineral hydrocarbon;

(*c*) no person shall, on and after 11th February 1965, consign or deliver, or import into Scotland, any food containing any mineral hydrocarbon.

Condemnation of food containing mineral hydrocarbon

7. Where any food is certified by a public analyst as being food in the composition or preparation of which any mineral hydrocarbon has been used which it is an offence against the foregoing provisions of these regulations to use, permit to be used, sell, consign or deliver, or import into Scotland, that food may be treated for the purposes of section 9 of the Act (under which food may be seized and destroyed on the order of a justice of the peace) as being unfit for human consumption.

(a) 18 & 19 Geo. 5. c. 19.
(b) S.R. & O. 1929/13 (Rev. I, p. 435: 1929, p. 39); S.I. 1950/215 (1950 I, p. 20).
(c) S.I. 1949/614 (1949 II, p. 14).
(d) S.I. 1950/1239, 1954/1044, 1956/1294 (1950 III, p. 41; 1954 I, p. 802; 1956 I, p. 1006).

Penalties

8.—(1) If any person contravenes or fails to comply with any of the foregoing provisions of these regulations he shall be guilty of an offence under these regulations.

(2) Any person who is guilty of an offence under these regulations shall be liable:—

(*a*) on summary conviction to:—

(i) a fine not exceeding £100 or to imprisonment for a term not exceeding six months, or to both such fine and imprisonment; and

(ii) in the case of a continuing offence to a further fine not exceeding £10 for every day during which the offence is continued; or

(*b*) on conviction on indictment to:—

(i) a fine not exceeding £500 or to imprisonment for a term not exceeding one year or to both such fine and imprisonment; and

(ii) in the case of a continuing offence, to a further fine not exceeding £50 for every day during which the offence is continued.

Application of various sections of the Act

9.—(1) Sections 41(2) and (5) (which relate to proceedings), 42(1), (2) and (3) (which relate to evidence of certificates of analysis), 44 (which relates to the power of a court to require analysis by the Government Chemist), 46(2) (which relates to the conditions under which a warranty may be pleaded as a defence) and 47 (which relates to offences in relation to warranties and certificates of analysis) of the Act shall apply for the purposes of these regulations as if references therein to proceedings, or a prosecution, under or taken under the Act included references to proceedings, or a prosecution as the case may be, taken for an offence against these regulations and in addition as if—

(*a*) in the case of section 44(1) of the Act, the reference therein to section 41(5) of the Act included a reference to said section 41(5) as applied by these regulations; and

(*b*) in the case of section 47(1) and (2) of the Act, the references therein to an offence against the Act included references to an offence against these regulations.

(2) Section 41(4) of the Act shall apply for the purposes of these regulations as if the reference therein to section 47 of the Act included a reference to said section 47 as applied by these regulations.

Revocation

10. The orders and regulations specified in Schedule 2 to these regulations shall cease to have effect on 11th February 1965.

Michael Noble,
One of Her Majesty's Principal Secretaries of State.

St. Andrew's House,
Edinburgh, 1.
31st July 1964.

SCHEDULE 1 Regulation 4(2)

PART I

SPECIFICATIONS FOR LIQUID MINERAL HYDROCARBON, SEMI-LIQUID MINERAL HYDROCARBON, AND PARAFFIN OR MICROCRYSTALLINE WAX

Specification for liquid mineral hydrocarbon

1. Liquid mineral hydrocarbon—

(*a*) shall be a transparent mixture of liquid hydrocarbons, almost colourless and tasteless;

(*b*) shall have an absorption intensity in iso-octane over the range 240–280 millimicrons not greater than $E\ {}^{1\%}_{1\ cm.}$ 0·4 (0·4 litre gm. cm.); and

(*c*) shall comply with the tests for acidity or alkalinity, carbonisable substances, solid paraffins, and sulphur compounds given in the monograph for Liquid Paraffin in the British Pharmacopoeia 1963.

Specification for semi-liquid mineral hydrocarbon

2. Semi-liquid mineral hydrocarbon—

(*a*) shall be a white translucent unctuous mixture of semi-liquid hydrocarbons barely fluorescent in daylight;

(*b*) shall contain not more than 0·1 per cent. of sulphated ash;

(*c*) shall have an absorption intensity in iso-octane at 290 millimicrons not greater than $E\ {}^{1\%}_{1\ cm.}$ 10·0 (1·0 litre gm. cm.); and

(*d*) shall comply with the tests for acidity or alkalinity and sulphur compounds given in the monograph for Liquid Paraffin in the British Pharmacopoeia 1963.

Specification for paraffin or microcrystalline wax

3. Paraffin or microcrystalline wax—

(*a*) shall be an almost odourless and tasteless mixture of solid hydrocarbons,

(*b*) shall contain not more than 0·1 per cent. of sulphated ash;

(*c*) shall have an iodine value of not more than 4·0;

(*d*) shall have an absorption intensity in iso-octane at 290 millimicrons not greater than $E\ {}^{1\%}_{1\ cm.}$ 0·4 (0·04 litre gm. cm.); and

(*e*) shall comply with the tests for acidity or alkalinity, and sulphur compounds given in the monograph for Liquid Paraffin in the British Pharmacopoeia 1963.

Specification for paraffin or microcrystalline wax in chewing compounds

4. Paraffin or microcrystalline wax in chewing compounds—

(*a*) shall comply with the specification set forth in paragraph 3 of this Part of this Schedule; and

(*b*) shall have been tested for the presence of polycyclic hydrocarbons by the method set forth in Part II of this Schedule with the result described in paragraph 5 of the said Part II.

PART II

METHOD OF TESTING PARAFFIN OR MICROCRYSTALLINE WAX FOR THE PRESENCE OF POLYCYCLIC HYDROCARBONS

Principle of method

1. The method is based on the maximum absorbance within four wavelength ranges of an extract prepared by chromatography on silica gel and partition of the adsorbate between cyclohexane and nitromethane followed by a second chromatography on silica gel impregnated with nitromethane. Some of the

polynuclear hydrocarbons are susceptible to photo-oxidation. The entire procedure subsequent to the addition of the wax to the chromatographic column must therefore be carried out under subdued light. No grease is to be used on stopcocks or joints.

Apparatus to be used

2. The following apparatus shall be used—

(*a*) a spectrophotometer capable of accurate measurement over the range 280–400 millimicrons ;

(*b*) fused quartz cells 10 mm. optical path length ; and

(*c*) chromatographic apparatus consisting of—

(i) a glass tube approximately 35 cm. by 3·5 cm. constricted at the lower end to fit a suction flask and capable of being heated to 85°C ; and

(ii) a glass tube approximately 115 cm. by 1·7 cm. sealed to a stopcock at the lower end and fitted with a solvent reservoir of approximately 500 ml. capacity.

Reagents to be used

3. The following reagents shall be used—

(*a*) solvents—namely iso-octane (2,2,4 trimethylpentane), benzene, cyclohexane, n-hexadecane, methanol, and nitro-methane freshly distilled under reduced pressure in a current of nitrogen on the day of use ;

(*b*) silica gel—which shall pass a 100 B.S. sieve and be retained on a 200 B.S. sieve, washed with methanol, and activated by heating at 150°C. for 16 hours in a current of clean air or nitrogen ; and

(*c*) nitrogen—which shall be oxygen free.

Method of conducting test

4. Any person conducting this test shall proceed as follows—

Dissolve 100 gm. ± 0·5 gm. of the molten sample in 500 gm. of hot iso-octane. Prepare a dry column (about 125 gm.) of silica gel in the tube mentioned in paragraph 2(*c*)(i) of this Part of this Schedule, retaining it by a glass wool plug at the constricted lower end. Heat the column to about 15°C. above the melting point of the wax, and pass through it 200 ml. of hot iso-octane at the rate of about 12 ml. per minute, using suction. A layer of solvent must cover the silica gel from this point until the elution of the column is completed. Pass the wax solution through the column and follow it with 500 ml. of hot iso-octane. Discontinue the heating and suction and let the column cool. Pass a further 50 ml. of iso-octane at room temperature through the column. Change the receiver at the bottom of the column and elute adsorbed material from the silica gel with 200 ml. of benzene. To the benzene eluate add 1 ml. of n-hexadecane and evaporate the benzene in a stream of nitrogen under reduced pressure. Transfer the residue to a separating funnel with 50 ml. of cyclohexane, add 25 ml. of nitromethane saturated with cyclohexane, and shake vigorously for three minutes. Draw off the lower layer into a second separating funnel and repeat the extraction with four separate portions of 25 ml. of nitromethane saturated with cyclohexane. To the combined nitromethane extracts add 20 ml. of cyclohexane and shake as before. Draw off the lower layer into an evaporation flask, add 1 ml. of n-hexadecane and remove the solvent in a stream of nitrogen under reduced pressure. Allow the flask to cool and dissolve the residue in 10 ml. of iso-octane.

Prepare by shaking together for one hour a mixture of 100 gm. of silica gel, and 40 ml. of nitromethane. Plug the stopcock end of the tube mentioned in paragraph 2(*c*)(ii) of this Part of this Schedule with glass wool and fill with nitromethane silica gel mixture. Transfer the solution of the residue to the column and wash with 160 ml. of iso-octane saturated with nitromethane, discarding the first 90 ml. of eluate. Percolation through the column

can be accelerated if necessary by the application of a pressure of nitrogen gas on the reservoir. Add 250 ml. of benzene to the solvent reservoir and continue the elution collecting the whole eluate. Add 1 ml. of n-hexadecane to the eluate and remove the solvents in a stream of nitrogen under reduced pressure. A residue of about 1 ml. should remain. Dissolve this residue in iso-octane and dilute to 100 ml. Determine the absorbance of the solution against pure iso-octane in a 1 cm. cell over the range of 280-400 millimicrons. Correct the absorbance values for any cell differences and for any absorbance derived from reagents as determined by carrying out the procedure without a wax sample.

Result of test

5. The tested paraffin or microcrystalline wax shall be deemed to have satisfied the test if the following result is obtained, namely if the light absorbance of the extract in a 1 cm. cell is below the following limits:—

Wavelength range (millimicrons)			
280–289	290–299	300–359	360–400
Absorbance Limit			
0·50	0·42	0·27	0·07

Check of test

6. The efficacy of the test shall be checked by determining the recovery of the polycyclic aromatic hydrocarbon Pyrene added at the level of 0·5 p.p.m. to a wax. The recovery should be not less than 40 per cent. of the amount added.

SCHEDULE 2

ORDERS AND REGULATIONS REVOKED

The Mineral Oil in Food Order 1949	S.I. 1949/614 (1949 II, p. 14)
The Mineral Oil in Food (Amendment) Order 1950	S.I. 1950/1239 (1950 III, p. 41)
The Mineral Oil in Food (Amendment) Order 1954	S.I. 1954/1044 (1954 I, p. 802)
The Mineral Oil in Food (Amendment) (Scotland) Regulations 1956	S.I. 1956/1294 (1956 I, p. 1006)

EXPLANATORY NOTE

(This Note is not part of the regulations, but is intended to indicate their general purport.)

These regulations, which apply to Scotland only, prohibit (subject to certain exemptions relating to dried fruit, citrus fruit, sugar confectionery, lubricants, cheese, eggs and chewing compounds) the use of any mineral hydrocarbon in the composition or preparation of food, the sale of food containing any mineral hydrocarbon, and, on and after 11th February 1965, the consignment, delivery or importation of any food containing any mineral hydrocarbon (regulation 6).

The regulations lay down specifications for mineral hydrocarbons the use of which is regulated in relation to the permitted exemptions, including a test for limits of content of certain polycyclic aromatic hydrocarbons (Schedule 1).

The regulations also make provision for the following :—

(*a*) the condemnation of food containing mineral hydrocarbon in contravention of the regulations (regulation 7) ;

(*b*) penalties for infringement of the regulations (regulation 8) ;

(*c*) enforcement by local authorities or (as regards the provisions of regulations 6 and 7 in so far as they relate to importation) by port local authorities (regulation 3(2)) ; and

(*d*) application of certain sections of the Food and Drugs (Scotland) Act 1956 relating to legal proceedings (regulation 9).

The regulations come into operation on 11th August 1964, but the use of mineral oil in the preparation of food, and the sale of food containing mineral oil, in compliance with the Mineral Oil in Food Order 1949 (as amended) is permitted until that order is revoked on 11th February 1965.