

**SUBSIDIARY LEGISLATION 549.14**

**LIMIT VALUES AND QUALITY OBJECTIVES FOR  
MERCURY DISCHARGES BY THE CHLOR-ALKALI  
ELECTROLYSIS INDUSTRY REGULATIONS**

1st March, 2002

*LEGAL NOTICE 220 of 2001, as amended by Legal Notices 426 of 2007  
and 24 of 2011.*

1. The title of these regulations is the Limit Values and Quality Objectives for Mercury Discharges by the Chlor-alkali Electrolysis Industry Regulations. Citation.

2. (1) For the purpose of these regulations and unless the context otherwise requires: Definitions and application.

"competent authority" means the Department for Environment Protection under the guidance of the Director for Environment Protection and such other body or person as the Minister responsible for the environment may by order in the Gazette prescribe and different bodies or persons may be designated as a competent authority for different provisions and different purposes of these regulations;

"existing plant" means an industrial plant which is operational on the date of entry into force these regulations;

"industrial plant" means a plant in which alkali chlorides are electrolyzed by means of mercury cells;

"limit values" means the values specified in Annex I;

"mercury" means:

- (a) the chemical element mercury;
- (b) the mercury contained in any of its compounds;

"new plant" means:

- (a) an industrial plant which has become operational after the date of entry into force of these regulations;
- (b) an existing industrial plant whose capacity for the electrolysis of alkali chlorides by means of mercury cells has been substantially increased after the date of entry into force of these regulations.

(2) These regulations apply to the waters referred to in regulation 2(2) of the Pollution Caused by Certain Dangerous Substances Discharged into the Aquatic Environment Regulations, with the exception of groundwater. S.L. 549.10

3. (1) The limit values, the time limits by which they shall be complied with and the monitoring procedure for discharges are laid down in Annex I. Limit values for mercury discharges.

*LIMIT VALUES AND QUALITY OBJECTIVES  
FOR MERCURY DISCHARGES BY  
THE CHLOR-ALKALI ELECTROLYSIS INDUSTRY*

2 [S.L.549.14

- S.L. 549.10 (2) The authorizations referred to in regulation 4 of the Pollution Caused by Certain Dangerous Substances Discharged into the Aquatic Environment Regulations shall contain provisions at least as stringent as those in Annex I to these regulations, except in cases where the competent authority is complying with regulation 7(3) of the Pollution Caused by Certain Dangerous Substances Discharged into the Aquatic Environment Regulations, on the basis of Annex IV to these regulations. The authorizations shall be reviewed at least every four years.
- S.L. 549.10 (3) Without prejudice to their obligations arising out of subregulations (1) and (2) and of the provisions of the Pollution Caused by Certain Dangerous Substances Discharged into the Aquatic Environment Regulations, the competent authority may grant a licence for new plants only if such a licence contains a reference to the standards corresponding to the best technical means available for preventing discharges of mercury.
- (4) The competent authority shall use or order the use of the reference method of analysis for determining the presence of mercury as given in Annex III.1 to these regulations. The competent authority may where appropriate use or allow the use of other methods, provided that the limits of detection, precision and accuracy of such methods shall be at least as good as those laid down in Annex III.I to these regulations. The accuracy required in the measurement of effluent flow shall be that given in Annex III.2 to these regulations.
- Monitoring the aquatic environment. 4. The competent authority shall be responsible for monitoring the aquatic environment affected by industrial discharges. In the case of discharges affecting Maltese waters or the waters of other countries, the competent authority shall cooperate with other states to harmonize monitoring procedures.
- Offences under these regulations. 5. Any person shall be guilty of an offence under these regulations if:
- (a) he fails to comply with any order lawfully given in terms of any provision of these regulations; or
  - (b) he contravenes any restriction, prohibition or requirement imposed by or under these regulations.
- Penalties.  
Amended by:  
L.N. 426 of 2007. 6. Any person who commits an offence against these regulations shall, on conviction, be liable:
- (a) on a first conviction to a fine (*multa*) of not less than one thousand and one hundred and sixty-four euro and sixty-nine cents (€1,164.69) but not exceeding two thousand and three hundred and twenty-nine euro and thirty-seven cents (€2,329.37);
  - (b) on a second or subsequent convictions, to a fine (*multa*) of not less than two thousand and three hundred and twenty-nine euro and thirty-seven cents (€2,329.37) but not exceeding four thousand and six hundred and fifty-eight euro and seventy-five cents

(€4,658.75) or to imprisonment for a term not exceeding two years, or to both such fine and imprisonment:

Provided that whenever any person is found guilty of committing an offence under these regulations by means of a vehicle, the owner of the said vehicle, where applicable, is held liable in the same manner and degree:

Provided further that the court shall order any person who has been found guilty of committing an offence against these regulations to pay for the expenses incurred by the public entities and, or other persons acting on their behalf involved in the implementation of these regulations and restitution of the environment as a result of the said offence, the revocation of the permit issued by the Police and the confiscation of the *corpus delicti*.

7. (1) The provisions of articles 23 and 30(1) of the Criminal Code shall, *mutatis mutandis*, apply to proceedings, in respect of offences against these regulations, so however that the disqualification from holding or obtain a licence, permit or authority shall in no case be for less than one year. Applicability of the Criminal Code.  
Cap. 9.

(2) Notwithstanding the provisions of article 370 of the Criminal Code, proceedings for an offence against these regulations shall be taken before the Court of Magistrates (Malta) or the Court of Magistrates (Gozo), as the case may be, and shall be in accordance with the provisions of the Criminal Code regulating the procedure before the said courts as courts of criminal judicature. Cap. 9.

(3) Notwithstanding the provisions of the Criminal Code, the Attorney General shall always have a right of appeal to the Court of Criminal Appeal from any judgement given by the Court of Magistrates (Malta) or the Court of Magistrates (Gozo) in respect of proceedings for any offence against these regulations. Cap. 9.

8. Annexes I to IV to these regulations are being published in the English language with the English text of these regulations. Language of Annexes.

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ANNEX I

Limit values, time limits by which they must be complied with,  
and monitoring procedure for discharges

1. The limit values expressed in terms of concentration which, in principle, should not be exceeded are set out in the following table.

Unit of measurement	Monthly average limit values not to be exceeded from		Remarks
	the date of entry into force of these regulations	3 years from the date of entry into force of these regulations	
Recycled brine and lost brine Micrograms of mercury per litre	75	50	Applicable to the total quantity of mercury present in all mercury-containing water discharged from the site of the industrial plant.

In all cases, limit values expressed as maximum concentrations may not be greater than those expressed as maximum quantities divided by water requirements per tonne of installed chlorine production capacity.

2. However, because the concentration of mercury in effluents depends upon the volume of water involved, which is different for different processes and plants, the limit values expressed in terms of quantity of mercury discharged in relation to installed chlorine production capacity given in the following table shall be observed in all cases.

Unit of measurement	Monthly average limit values not to be exceeded from		Remarks
	the date of entry into force of these regulations	3 years from the date of entry into force of these regulations	
Recycled brine Grams of mercury per tonne of installed chlorine production capacity	0.5	0.5	Applicable to the mercury present in effluent discharged from the chlorine production unit
	1.5	1.0	Applicable to the total quantity of mercury present in all mercury-containing water discharged from the site of the industrial plant
Lost brine Grams of mercury per tonne of installed chlorine production capacity	8.0	5.0	Applicable to the total quantity of mercury present in all mercury-containing water discharged from the site of the industrial plant

3. The daily average limit values are four times the corresponding monthly average limit values given in points 1 and 2.

4. In order to check whether the discharges comply with the emission standards which have been fixed in accordance with the limit values laid down in this Annex, a monitoring procedure shall be instituted. This procedure shall provide for:

- (a) the taking each day of a sample representative of the discharge over a

period of 24 hours and the measurement of the mercury concentration of that sample; and

- (b) the measurement of the total flow of the discharge over that period.

The quantity of mercury discharged during a month shall be calculated by adding together the quantities of mercury discharged each day during that month. This total shall then be divided by the installed chlorine production capacity.

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## ANNEX II

### Quality objectives

*(Revoked by Legal Notice 24 of 2011)*

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## ANNEX III

### Reference method of measurement

1. The reference method of analysis for determining the mercury content in waters, the flesh of fish, sediments and shellfish shall be by flameless atomic absorption spectrophotometry after suitable pre-treatment of the sample which takes account in particular of pre-oxidation of the mercury and of successive reduction of the mercury ions Hg (II).

The limits of detection\* must be such that the mercury concentration can be measured to an accuracy<sup>†</sup> of  $\pm 30\%$  and a precision<sup>‡</sup> of  $\pm 30\%$  at the following concentrations:

- (a) in the case of discharges, one tenth of the maximum permitted concentration of mercury specified in the authorization,
  - (b) in the case of surface water, one tenth of the mercury concentration specified in the quality objective,
  - (c) in the case of the flesh of fish and shellfish, one tenth of the mercury concentration specified in the quality objective,
  - (d) in the case of sediments, one tenth of the mercury concentration in the sample or 0.05 mg/kg dry weight, whichever is the greater.
2. Flow measurement shall be carried out to an accuracy of  $\pm 20\%$ .

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\*The definitions of these terms are as given in the Methods of Measurement and Frequencies of Sampling and Analysis of Surface Water intended for the Abstraction of Drinking Water Regulations. (still to transpose Directive 79/869/EEC).

<sup>†</sup>*Ibid.*

<sup>‡</sup>*Ibid.*

ANNEX IV

Monitoring procedure for quality objectives

1. For each authorization granted in pursuance of these regulations, the competent authority shall specify the restrictions, the monitoring procedure and deadlines for ensuring compliance with the quality objective or objectives concerned.

2. In accordance with regulation 7(3) of regulation 7 of the Certain Dangerous Substances discharged into the Aquatic Environment Regulations, the competent authority shall report to the Commission for each quality objective chosen and applied, on:

- (a) the points of discharge and the means of dispersal;
- (b) the area in which the quality objective is applied;
- (c) the location of sampling points;
- (d) the frequency of sampling;
- (e) the methods of sampling and of measurement;
- (f) the results obtained.

3. Samples shall be properly representative of the quality of the aquatic environment in the area affected by the discharges, and the frequency of sampling shall be sufficient to show any changes in the aquatic environment, taking into account in particular natural variations in the hydrological regime. The salt-water fish analysis shall be carried out on a sufficiently representative number of samples and species.

4. With regard to the quality objective in 1.1 of Annex II, the competent authority shall choose the species of fish to be adopted as indicators for analysis. For salt waters the species chosen from among those inhabiting coastal waters and caught locally may include cod, whiting, plaice, mackerel, haddock and flounder.

Statement on regulation 3(3)

The Council and the Commission state that the application of the best technical means available makes it possible to limit discharges of mercury from the site of a new industrial plant using the recycled-brine process to less than 0.5 g/tonne of installed chlorine production capacity.

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