EUROPEAN CHEMICALS AGENCY

Helsinki, 05 May 2021

Addressees
Registrants of JS_NaI_[redacted] as listed in the last Appendix of this decision

Date of submission of the dossier subject to this decision
01/12/2018

Registered substance subject to this decision ("the Substance")
Substance name: Sodium iodide
EC number: 231-679-3
CAS number: 7681-82-5

Decision number: Please refer to the REACH-IT message which delivered this communication (in format CCH-D-XXXXXXXXXX-XX-XX/F)

DECISION ON A COMPLIANCE CHECK

Under Article 41 of Regulation (EC) No 1907/2006 (REACH), you must submit the information listed below, by the deadline of ***10 August 2023***.

Requested information must be generated using the Substance unless otherwise specified.

A. Information required from all the Registrants subject to Annex VII of REACH

1. Growth inhibition study aquatic plants (Annex VII, Section 9.1.2.; test method: [EU C.3./OECD TG 201 // EU C.26./OECD TG 221])

B. Information required from all the Registrants subject to Annex VIII of REACH

1. In vitro cytogenicity study in mammalian cells (Annex VIII, Section 8.4.2.; test method: OECD TG 473) or In vitro micronucleus study (Annex VIII, Section 8.4.2.; test method: OECD TG 487)
2. If negative results are obtained in test performed for the information requirement of Annex VIII, Section 8.4.2. then: In vitro gene mutation study in mammalian cells (Annex VIII, Section 8.4.3.; test method: OECD TG 476 or TG 490)
3. Justification for an adaptation of a Short-term repeated dose toxicity (28 days) based on the results of the Sub-chronic toxicity study (90 days) requested below (Annex VIII, Section 8.6.1.)
4. Screening for reproductive/developmental toxicity (Annex VIII, Section 8.7.1.; test method: EU B.63/OECD TG 421 or EU B.64/OECD TG 422) by oral route, in rats

C. Information required from all the Registrants subject to Annex IX of REACH

1. Sub-chronic toxicity study (90-day) (Annex IX, Section 8.6.2.; test method: OECD TG 408) by oral route, in rats
2. Pre-natal developmental toxicity study (Annex IX, Section 8.7.2.; test method: OECD TG 414) by oral route, in one species (rat or rabbit)
3. Long-term toxicity testing on aquatic invertebrates (Annex IX, Section 9.1.5.; test method: EU C.20./OECD TG 211)

4. Long-term toxicity testing on fish (Annex IX, Section 9.1.6.; test method: OECD TG 210)

Reasons for the request(s) are explained in the following appendices:

- Appendix entitled "Reasons common to several requests";
- Appendices entitled "Reasons to request information required under Annexes VII to IX of REACH", respectively.

Information required depends on your tonnage band

You must provide the information listed above for all REACH Annexes applicable to you, and in accordance with Articles 10(a) and 12(1) of REACH:

- the information specified in Annex VII to REACH, for registration at 1-10 tonnes per year (tpa), or as a transported isolated intermediate in quantity above 1000 tpa;
- the information specified in Annexes VII and VIII to REACH, for registration at 10-100 tpa;
- the information specified in Annexes VII, VIII and IX to REACH, for registration at 100-1000 tpa;

You are only required to share the costs of information that you must submit to fulfil your information requirements.

How to comply with your information requirements

To comply with your information requirements you must submit the information requested by this decision in an updated registration dossier by the deadline indicated above. You must also update the chemical safety report, where relevant, including any changes to classification and labelling, based on the newly generated information.

You must follow the general testing and reporting requirements provided under the Appendix entitled "Requirements to fulfil when conducting and reporting new tests for REACH purposes". In addition, you should follow the general recommendations provided under the Appendix entitled "General recommendations when conducting and reporting new tests for REACH purposes". For references used in this decision, please consult the Appendix entitled "List of references".

Appeal

This decision, when adopted under Article 51 of REACH, may be appealed to the Board of Appeal of ECHA within three months of its notification to you. Please refer to http://echa.europa.eu/regulations/appeals for further information.

Failure to comply

If you do not comply with the information required by this decision by the deadline indicated above, ECHA will notify the enforcement authorities of your Member State.

Authorised[1] under the authority of Christel Schilliger-Musset, Director of Hazard Assessment

Appendix on Reasons common to several requests

[1] As this is an electronic document, it is not physically signed. This communication has been approved according to ECHA's internal decision-approval process.

1. Assessment of your read-across approach under Annex XI, Section 1.5.

In your dossier you seek to adapt the following standard information requirements by applying a read-across approach in accordance with Annex XI, Section 1.5:

- In vitro cytogenicity study in mammalian cells or in vitro micronucleus study (Annex VIII, Section 8.4.2.)
- Screening for reproductive/developmental toxicity (Annex VIII, Section 8.7.1.)
- Pre-natal developmental toxicity study (Annex IX, Section 8.7.2.)
- Long-term toxicity testing on aquatic invertebrates (Annex IX, Section 9.1.5.)

In your comments to the draft decision, you provide sources of information relating to analogue substances in support of a weight-of-evidence adaptation according to Annex XI, section 1.2., for the following information requirements:

- Growth inhibition study aquatic plants (Annex VII, Section 9.1.2.)
- *In vitro* gene mutation study in mammalian cells (Annex VIII, Section 8.4.3)
- Long-term toxicity testing on aquatic invertebrates (Annex IX, Section 9.1.5.)
- Long-term toxicity testing on fish (Annex IX, Section 9.1.6.1.)

ECHA has considered the scientific and regulatory validity of your read-across approach(es) in general before assessing the specific standard information requirements in the following appendices.

According to Annex XI, Section 1.5., two conditions must be necessarily fulfilled to apply grouping and read-across. Firstly, there needs to be structural similarity between substances which results in a likelihood that the substances have similar physicochemical, toxicological and ecotoxicological properties so that the substances may be considered as a group or category. Secondly, it is required that the relevant properties of a substance within the group may be predicted from data for reference substance(s) within the group (read-across approach).

A read-across hypothesis needs to be provided, establishing why a prediction for a toxicological or ecotoxicological property is reliable. This hypothesis should be based on recognition of the structural similarities and differences between the substances. It should explain why the differences in the chemical structures should not influence the toxicological/ ecotoxicological properties or should do so in a regular pattern.

Additional information on what is necessary when justifying a read-across approach can be found in the ECHA Guidance[2] and related documents[3, 4].

For the above-mentioned information requirements, you have provided studies conducted with another substance than your Substance in order to comply with the REACH information requirements.

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[2] Guidance on information requirements and chemical safety assessment Chapter R.6: QSARs and grouping of Chemicals. 2008 (May) ECHA, Helsinki. 134. pp. Available online: https://echa.europa.eu/documents/10162/13632/information_requirements_r6_en.pdf/77f49f81-b76d-40ab-8513-4f3a533b6ac9

[3] Read-Across Assessment Framework (RAAF). 2017 (March) ECHA, Helsinki. 60 pp. Available online: Read-Across Assessment Framework (https://echa.europa.eu/support/registration/how-to-avoid-unnecessary-testing-on-animals/grouping-of-substances-and-read-across)

[4] Read-across assessment framework (RAAF) - considerations on multi-constituent substances and UVCBs. 2017 (March) ECHA, Helsinki. 40 pp. Available online: https://doi.org/10.2823/794394

More specifically, you have provided,

- For the *in vitro* cytogenicity study in mammalian cells or *in vitro* micronucleus endpoint,
  (i) One cytokinesis-block micronucleus assay on CHO cells, which tested Calcium iodate (EC number 232-191-3) (WoE from the registrants; review article or handbook) – to address *in vitro* cytogenicity (Annex VIII, Section 8.4.2.).

  (ii) One cytokinesis-block micronucleus assay on CHO cells which tested both Potassium iodate (EC number 231-831-9) and Potassium iodide (EC number 231-659-4) (Lack of genotoxicity of potassium iodate in the alkaline comet assay and in the cytokinesis-block micronucleus test; JM Poul, S Huet, and P Sanders, 2004) – to address *in vitro* cytogenicity (Annex VIII, Section 8.4.2.).

You have not provided any documentation as to why this information on calcium iodate or potassium iodate is relevant for your Substance.

In the absence of such documentation, ECHA is deprived from the possibility to verify that the properties of your Substance can be predicted from the data on the source substances.

Therefore, your adaptation does not comply with the general rules of adaptation as set out in Annex XI, Section 1.5. and your grouping and read-across approach is rejected.

While you had initially not provided any documentation you have provided a read-across justification documentation as part of your comments to the draft decision. In this document, your read-across justification relies on different source substances for different information requirements, as detailed below.

You have provided the following reasoning for the prediction of (eco)toxicological properties: the source substances were identified '*on the basis of physico-chemical properties, structural similarity, uses and also by considering cation-anion as a base group moiety to the target chemical*'.

ECHA understands that you predict the properties of the Substance using a read-across hypothesis which assumes that different compounds have the same type of effects. The properties of your Substance are predicted to be quantitatively equal to those of the source substance.

ECHA notes the following shortcomings with regards to predictions of (eco)toxicological properties.

As noted above, the read-across hypothesis should explain why the differences in the chemical structures should not influence the toxicological/ ecotoxicological properties.

Your read-across hypothesis is that the structural similarity between the source substances and your Substance is a sufficient basis for predicting the properties of your Substance, either because they share a common anion, or a common cation, or the anions are halides (Periodic Table Group 7).

a) Iodine (EC number 231-442-4) as the source substance
   You read-across between the structurally similar substance iodine (EC number 231-442-4) as source substance and the Substance as target substance for *in vitro* gene mutation in mammalian cells.

   You have provided the following reasoning for the prediction of toxicological properties: you state that the substances share iodide as the common anion.

ECHA notes the following shortcoming with regards to prediction of toxicological properties. The source substance iodine does not contain iodide, i.e. iodide in a different oxidation state than the target Substance. You have not addressed the impact of the difference in the oxidation state of iodine in your read-across justification.

b) Sodium Fluoride (EC number 231-667-8) and Sodium bromide (EC number 7647-15-6) as source substances
You read-across between the structurally similar substances Sodium fluoride (EC number 231-667-8) and Potassium fluoride (EC number 232-151-5) as source substances and the Substance as target substance, because of the common cation and because the anions are both halides (Periodic Table Group 7) for:
- Growth inhibition in aquatic plants;
- Long-term toxicity in aquatic invertebrates; and
- Long-term toxicity to fish.

ECHA notes the following shortcoming with regards to predictions of ecotoxicological properties: sodium fluoride or sodium bromide do not inform on the properties of the Substance because the source substances do not contain iodide. Furthermore, you have not addressed the impact of the difference chemical reactivity and biological properties between fluoride or bromide and iodide in the read-across justification.

While structural similarity is a prerequisite for applying the grouping and read-across approach, it does not necessarily lead to predictable or similar human health/ ecotoxicological properties. You have not provided a well-founded hypothesis to establish a reliable prediction for a toxicological or ecotoxicological property, based on recognition of the structural similarities and differences between the source substances and your Substance, as detailed below for each source substance.

Conclusions on the read-across approach

As explained above, you have not established that relevant properties of the Substance can be predicted from data on the analogue substances. Therefore, your adaptation does not comply with the general rules of adaptation as set out in Annex XI, Section 1.5. and your grouping and read-across approach is rejected.

2. Assessment of the weight of evidence adaptations under the requirements of Annex XI, section 1.2

In your dossier you adapted the following standard information requirements by a applying weight of evidence (WoE) adaptation in accordance with Annex XI, section 1.2:
- In vitro cytogenicity study in mammalian cells or in vitro micronucleus study (Annex VIII, Section 8.4.2.)

In your comments on the draft decision, you have adapted the following standard information requirements by applying a weight of evidence adaptation:

- Growth inhibition study aquatic plants (Annex VII, Section 9.1.2)
- *In vitro* gene mutation study in mammalian cells (Annex VIII, Section 8.4.3)
- Long-term toxicity testing on aquatic invertebrates (Annex IX, Section 9.1.5)
- Long-term toxicity testing on fish (Annex IX, Section 9.1.6)

Your weight of evidence adaptation raises the same decifiencies irrespective of the information requirement for which it is invoked. Accordingly, ECHA addressed these deficiencies in the

present Appendix, before assessing the specific standard information requirements in the following appendices.

Annex XI, Section 1.2 states that there may be sufficient weight of evidence from several independent sources of information leading to assumption/conclusion that a substance has or has not a particular dangerous (hazardous) property, while information from a single source alone is insufficient to support this notion.

According to ECHA Guidance R.4, a weight of evidence adaptation involves an assessment of the relative values/weights of the different sources of information submitted. The weight given is based on the reliability of the data, consistency of results/data, nature and severity of effects, and relevance and coverage of the information for the given regulatory information requirement. Subsequently, relevance, reliability, coverage, consistency and results of these sources of information must be balanced in order to decide whether they together provide sufficient weight to conclude that the Substance has or has not the (dangerous) property investigated by the required study.

Annex XI, section 1.2 requires that adequate and reliable documentation is provided to describe your weight of evidence approach.

You have not submitted any explanation why the sources of information provide sufficient weight of evidence for each of the relevant information requirement leading to the conclusion/assumption that the Substance has or has not a particular dangerous property.

In spite of this critical deficiency, ECHA has nevertheless assessed the validity of your adaptation. The specific ones are set out under the information requirement concerned in the Appendices below.

Reliability of the read-across adaptation

You provide sources of information relating to analogue substances in support of a weight-of-evidence adaptation for the following information requirements:

- Growth inhibition study aquatic plants (Annex VII, Section 9.1.2)
- *In vitro* cytogenicity study in mammalian cells or in vitro micronucleus study (Annex VIII, Section 8.4.2.)
- *In vitro* gene mutation study in mammalian cells (Annex VIII, Section 8.4.3)
- Long-term toxicity testing on aquatic invertebrates (Annex IX, Section 9.1.5)
- Long-term toxicity testing on fish (Annex IX, Section 9.1.6)

However, the reliability of these sources of information is significantly affected by the deficiencies identified in section 1 above.

Appendix A: Reasons to request information required under Annex VII of REACH

1. Growth inhibition study aquatic plants

Growth inhibition study aquatic plants is a standard information requirement in Annex VII to REACH.

You have provided two studies for this endpoint in your dossier:

i. A key study on the cell proliferation of freshwater green algae *Scenedesmus quadricauda*, in the secondary literature.
ii. A supporting study population growth rate of freshwater blue-green algae *Microcystis aeruginosa,* in the secondary literature, from the US Environmental Protection Agency.

Although you do not explicitly claim an adaptation, ECHA understands that these studies were submitted in order to meet the required information by way of adaptation according to Annex XI, Section 1.1.2. This adaptation rule enables registrants to claim that the data from experiments not carried out according to GLP or the test methods referred to in Article 13(3) can be considered equivalent to data generated by those test methods.

In your comments on the draft decision you have provided an adaptation under Annex XI, Section 1.2. of REACH (weight of evidence) with the following additional supporting information:

iii. An algal growth test in *Scenedesmus pannonicus* according to the Dutch Standardization Organization NEN 6506 method on the source substance sodium bromide (EC number 231-599-9).
iv. An algal growth test in *Scenedesmus pannonicus* according to the Water Organisms, DIN 38 412, Part 1, 1982 method on the source substance sodium fluoride (EC number 231-667-8).
v. An algal growth test in *Dunaliella salina*, *Chlorella sp.* and *Cryptomonas sp.* on the source substance potassium iodide (EC number 231-659-4); [redacted] (2005).

We have assessed this information and identified the following issues:

a) Adaptation according to Annex XI, Section 1.1.2 in the dossier.

The adaptation rule in Annex XI, Section 1.1.2 imposes a number of cumulative conditions for an adaptation to be valid, in particular:

- Adequate and reliable coverage of the key parameters foreseen to be investigated in the corresponding test methods referred to in Article 13(3), in this case OECD TG 201;
- Exposure duration comparable to or longer than the corresponding test methods referred to in Article 13(3);
- Adequacy for the purpose of classification and labelling and/or risk assessment.

In particular, OECD TG 201 requires that the following key paramteres are covered (among others):

- Suitable species of green algae specified in OECD TG are *Pseudokirchneriella subcapitata*, (formerly known as *Selenastrum capricornutum*), ATCC 22662, CCAP 278/4, 61.81 SAG and *Desmodesmus subspicatus* (formerly known as *Scenedesmus subspicatus*) 86.81 SAG. If other species are used, you must first confirm that exponential growth of the selected test alga can be maintained throughout the test period under the prevailing conditions.
- At least five concentrations, arranged in a geometric series with a factor not exceeding 3.2, should be tested, preferably covering the range causing 5 to 75%

inhibition of algal growth rate.
- The test design should include three replicates at each test concentration with at least three control replicates.
- The performance criteria as set up in the test guideline must be met:
  (a) the biomass in the control cultures should have increased exponentially by a factor of at least 16 within the test period,
  (b) the mean coefficient of variation for section by section specific growth rates in the control cultures must not exceed 35% and
  (c) the coefficient of variation of average specific growth rates during the whole test period in replicate control cultures must not exceed 10%.
- The test solutions should be analysed to verify the initial concentrations and maintenance of the exposure concentrations during the test.

The provided studies were not performed based on OECD TG 201. In particular the study i. in *Scenedesmus quadricauda* is not acceptable for the following reasons:

- The study was conducted in the green algae species *Scenedesmus quadricauda,* not one of the suitable species specified in OECD TG 201, yet there is no information to confirm that exponential growth can be maintained throughout the test period.
- The concentrations tested are not reported.
- The number of replicates are not reported.
- Information to establish the performance criteria are met is not reported.
- Analytical monitoring is not reported.

The study ii. in *Microcystis aeruginosa* is not acceptable for the following reasons:

- The study was conducted in the cyanobacteria species *Microcystis aeruginosa*, not one of the suitable species specified in OECD TG 201, yet there is no information to confirm that exponential growth can be maintained throughout the test period.
- The concentrations tested are not reported.
- The number of replicates are not reported.
- Information to establish the performance criteria are met is not reported.
- Analytical monitoring is not reported.

Based on the above, the provided information cannot be considered to be adequate for classification and labelling and/or risk assessment.

b) Adaptation according to Annex XI, Section 1.2. (weight-of-evidence) in your comments.

To fulfil the information requirement, normally a study performed according to OECD TG 201 must be provided. OECD TG 201 requires the study to investigate the concentrations of the test material leading to a 50 % and 0% (or 10%) inhibition of growth at the end of the test are estimated. Growth must be expressed as the logarithmic increase in biomass (average specific growth rate) during the exposure period.

The sources of information i. and ii. provide relevant information, but there are deficiencies affecting their reliability, as described above.

The sources of information iii. and iv. provide relevant information. However, read-across is not reliable, as described in section 1 of the Appendix on Reasons common to several requests, and your grouping and read-across approach is rejected.

The source of source of information v. is relevant. However, there are deficiencies affecting its reliability. The key requirements of OECD TG 201 are described above. However, as

regards study v.:

- *Chlorella sp.* and *Dunaliella salina* are not freshwater species.
- The study was conducted in the freshwater green algae *Cryptomonas sp,* not one of the suitable species specified in OECD TG 201, yet there is no information to confirm that exponential growth can be maintained throughout the test period.
- The concentrations tested are not reported.
- The number of replicates are not reported.
- Information to establish the performance criteria are met is not reported.
- There was no solution analysis.

Based on the above, the study v. does not provide adequate and reliable coverage of the key parameters foreseen to be investigated in the OECD TG 201 as its reliability is regarded as low.

Consequently, it is not possible to conclude, based on any source of information alone or considered together, whether your Substance has or has not the particular dangerous properties foreseen to be investigated in an OECD TG 201 study. Therefore, your adaptation is rejected and the information requirement is not fulfilled.

Appendix B: Reasons to request information required under Annex VIII of REACH

1. In vitro cytogenicity study in mammalian cells or In vitro micronucleus study

An *in vitro* cytogenicity study in mammalian cells or an *in vitro* micronucleus study is a standard information requirement in Annex VIII to REACH.

You have provided the following studies in your dossier, as part of a weight of evidence adaptation in accordance with section 1.2 of Annex XI:

i. cytokinesis-block micronucleus assay on CHO cells, on calcium iodate (EC number 232-191-3) (summary from the registrants; source is not clear and no test guideline nor information on GLP compliance was provided);
ii. cytokinesis-block micronucleus assay in CHO cells using potassium iodate (EC number 231-831-9) and potassium iodide (EC number 231-659-4) (JM Poul, S Huet and P Sanders, 2004).

You also have provided a summary of the following study in your comments as an additional source of information for the weight of evidence adaptation:

iii. An OECD TG 473 (GLP) study performed with the Substance on human peripheral blood lymphocyte cultures.

We have assessed this information and identified the following issues with the sources of information for your weight of evidence adaptation:

To fulfil the information requirement, normally an *in vitro* chromosomal aberration test or an *in vitro* micronucleus test, conducted in mammalian cells performed according to OECD TG 473 or 487 must be provided. OECD TG 473 or 487 require the study to investigate the following:

1. detection of chromosome breakage, i.e. micronuclei, which may originate from acentric fragments or whole chromosomes, at any stage of the cell cycle (min. 1.5-2.0 normal cell cycle lengths), and on a representative number of binucleate cells (at least 2000)
2. definition of frequencies of binucleate cells with micronuclei
3. Identification of the mechanism leading to clastogenic or aneugenic activity, in case of positive results

Because the results are negative, point 3. (identification of mechanism) is not necessary.

Concerning 1. (detection of micronuclei) and 2. (definition of frequencies), the sources of information i., ii. and iii. provide relevant information, but there are deficiencies that significantly affect their reliability:

a- Grouping and read-across approach: For the reason explained in section 1 of the Appendix on reasons common to several requests), your adaptation does not comply with the general rules of adaptation as set out in Annex XI, Section 1.5. and your grouping and read-across approach is rejected for studies i. and ii..

b- Adequacy and reliability of the source studies i. and ii. and iii.:
To fulfil the information requirement, the study has to be an *in vitro* chromosomal aberration test or an *in vitro* micronucleus test, conducted in mammalian cells in accordance with OECD TG 473 or OECD TG 487, respectively[5]. The key criteria of these test guidelines include that, among others:

[5] ECHA Guidance R.7a, Table R.7.7-2, p.557

- Two separate test conditions must be assessed: in absence of metabolic activation and in presence of metabolic activation.
- At least 3 concentrations must be evaluated, in each test condition.
- The response for the concurrent negative control must be inside the historical control range of the laboratory. A positive control must also be reported
- Positive controls for both clastogenicity (-: MMS/ +: BaP) and aneugenicity (colchicine) must be used in metabolically competent cells
- Data on the cytotoxicity and the frequency of cells with structural chromosomal abberations/ micronuclei for the treated and control cultures must be reported.

However the reported data for the studies you have provided:

- Do not include two separate test conditions, as reporting is scarce for study i. on whether the experiment was conducted with or without metabolic activation; and because the study ii. was performed only in absence of metabolic activation.
- Do not include the evaluation of at least 3 concentrations in presence of metabolic activation.
- Only water is used as an untreated negative control in study iii.; furthermore you did not report information on positive controls for study iii.
- Only colchicine is used as positive control.
- A report of data on the cytotoxicity and on the frequency of micronuclei for the treated and control cultures is lacking.

The information provided does not cover some key criteria required by the OECD TG 487 or OECD TG 473.

Consequently, it is not possible to conclude, based on any source of information alone or considered together, whether your Substance has or has not the particular dangerous properties foreseen to be investigated in an OECD TG 487 study or OECD TG 473. Therefore, your weight of evidence adaptation is rejected and the information requirement is not fulfilled.

Information on the study design

To fulfil the information requirement for the Substance, both in vitro cytogenicity study in mammalian cells (OECD TG 473) and in vitro micronucleus study (OECD TG 487) are considered suitable.

2. In vitro gene mutation study in mammalian cells

An *in vitro* gene mutation study in mammalian cells is a standard information requirement in Annex VIII to REACH in case of a negative result in both the *in vitro* gene mutation test in bacteria and the *in vitro* cytogenicity test.

Your dossier contains a negative result for *in vitro* gene mutation study in bacteria.

The information for the *in vitro* cytogenicity endpoint provided in the dossier is rejected for the reasons provided in section B.1.

In your comments on the draft decision you have provided an adaptation under Annex XI, Section 1.2. of REACH (weight of evidence) with the following soures of information:

i. a mouse lymphoma assay in L5178Y mouse cells performed with the analogue substance Potassium iodide (EC number 231-459-4) and only in absence of metabolic activation.
ii. a mouse lymphoma assay in L5178Y mouse cells performed with the analogue substance Iodine (EC number 231-442-4) and only in absence of metabolic

activation.

To fulfil the information requirement, normally a study performed according to OECD TG 476 or OECD TG 490 must be provided. OECD TG 476 or 490 require the study to investigate the detection and quantification of gene mutations (point mutations, frame-shift mutations, small deletions, etc.) including data on the frequency of mutant colonies in cultured mammalian cells (*in vitro*) or mutant frequency for each tissue in mammals (*in vivo*).

The sources of information i. and ii. provide relevant information, but there are deficiencies affecting their reliability.

For the reason explained in section 1 of the Appendix on reasons common to several requests), your read-across adaptation for study ii. does not comply with the general rules of adaptation as set out in Annex XI, Section 1.5. and your read-across is rejected.

Nevertheless, we have assessed the reliability of studies i. and ii. and identified the following issues:

To fulfil the information requirement, the *in vitro* gene mutation study on mammalian cells must meet the requirements of OECD TG 476 or OECD TG 490. The key parameters of these test guidelines include:

- Two separate test conditions must be assessed: in absence of metabolic activation and in presence of metabolic activation (see eg. paragraph 38 of OECD TG 476).
- At least 4 concentrations must be evaluated, in each test condition.
- The response for the concurrent negative control must be inside the historical control range of the laboratory.
- Data on the cytotoxicity and the mutation frequency for the treated and control cultures must be reported.

The reported data for the studies you have provided do not include:

- two separate test conditions, as the study was only conducted in the absence of metabolic activation (both studies i. and ii.);
- the evaluation of at least 4 concentrations in the presence of metabolic activation (both studies i. and ii.);
- a negative control with a response inside the historical control range of the laboratory;
- data on the cytotoxicity and the mutation frequency for the treated and control cultures.

The information provided does not cover key parameters required by the OECD TG 476 or by the OECD TG 490 and its reliability is therefore considered low

Consequently, it is not possible to conclude, based on any source of information alone or considered together, whether your Substance has or has not the particular dangerous properties foreseen to be investigated in an OECD TG 476 or 490 study. Therefore, your adaptation is rejected and the information requirement is not fulfilled.

The result of the request for information in section B.1. will determine whether the present requirement for an *in vitro* mammalian cell gene mutation study in accordance with Annex VIII, Section 8.4.3 is triggered.

Consequently, you are required to provide information for this endpoint, if the *in vitro* cytogenicity study in mammalian cells or an *in vitro* micronucleus study provides a negative result.

Information on the study design

To fulfil the information requirement for the Substance, both the *in vitro* mammalian cell gene mutation tests using the hprt and xprt genes (OECD TG 476) and the thymidine kinase gene (OECD TG 490) are considered suitable.

3. Justification for an adaptation of a Short-term repeated dose toxicity (28 days) based on the results of the Sub-chronic toxicity study (90 days)

A Short-term repeated dose toxicity study (28 days) is a standard information requirement in Annex VIII to REACH. This information may take the form of a study record or a valid adaptation in accordance with either a specific adaptation rule under Column 2 of Annex VIII or a general adaptation rule under Annex XI.

You have provided two supporting studies for this endpoint in your dossier:

i. A repeated (21 days) dose oral toxicity study on the Substance in Wistar rats (Krari *et al.*, 1992).
ii. A repeated (28 days) dose oral toxicity study on the Substance in Walter Reed strain albino rats (Woodward and Berard, 1963).

In your comments on the draft decision you have provided:

iii. Some details of a repeated dose toxicity (28-day) study (OECD TG 407) with the Substance.

We have assessed this information and identified the following issues:

To be considered compliant and enable concluding whether the Substance has dangerous properties and supports the determination of the No-Observed Adverse Effect Level (NOAEL), a study has to meet the requirements of OECD TG 407. The following key parameter(s) of this test guideline include:

- testing of at least three dose levels and a concurrent control
- highest dose level should aim to induce some systemic toxicity, but not death or severe suffering
- dosing of the Substance daily for a period of 28 days until the scheduled termination of the study
- examination of the animals for key parameters, such as clinical signs, changes in posture, clinical biochemistry, gross pathology, mortality,
- full detailed gross necropsy and subsequent histopathology of both types tissues/ other
- detailed reporting of the examinations (including tables) and the related observations.

However, for the studies you have provided:

- Studies i. and ii, were conducted with less than three dose levels, respectively with only one dose (study i.) and two doses (study ii.).
- The highest dose level in the studies i. and ii. did not induce any systemic toxicity, since you were merely able to define a LOAEL. Therefore, the dose level selection was too low.
- The study i. you have provided does not have the required exposure duration of 28 days as required in OECD TG 407, because you indicated an exposure duration of 21 days.
- The studies i. and ii. provided did not examine or report the following key parameters : clinical signs (e.g. changes in skin, fur, eyes, occurrence of secretions and autonomic activity such as lacrimation, piloerection, unusual respiratory pattern), changes in gait, posture and presence of clonic or tonic movements, stereotypies (or bizarre behaviour), gross necropsy of organs and tissues, including thyroid, sexual organs and observations of alterations asvariations or malformations). Also clinical biochemistry determinations to investigate major toxic effects in tissues (kidney and liver) have not been reported. There is no information on mortality or gross pathology.
- You provided that observations in study iii. "*comprised of mortality/morbidity, clinical*

signs, detailed clinical observation, body weight, body weight gain, feed consumption, ophthalmoscopic examination, functional observational battery/neurobehavioral observation, haematology, clinical biochemistry, urinalysis, gross pathology and histopathology (vehicle control group and high dose group)." However beside this statement, you have not provided reporting for some of the examinations (including tables) and the related observations.

- Moreover, you did not report the details of study iii. in a form of a robust study summary, as required by Article 10(a)(vii) and Article 3(28).

Consequently the information you provided in your dossier and in your comments does not fulfil the information requirement.

Column 2 of Annex VIII, Section 8.6.1. provides that an experimental study for this information requirement is not needed if a reliable sub-chronic (90 days) or chronic toxicity study is available.

The present decision requests the registrants concerned to generate and submit a reliable sub-chronic toxicity study (90 days) (see Section C.1). According to Column 2 of Annex VIII, Section 8.6.1., and to prevent unnecessary animal testing, a short term toxicity study (28 days) does not therefore need to be conducted.

Because you must still comply with the information requirement in Annex VIII, Section 8.6.1., you are requested to submit a justification for the adaptation provided in Column 2 of that provision.

4. Screening for reproductive/developmental toxicity

A Screening for reproductive/developmental toxicity study (test method: EU B.63/OECD TG 421 or EU B.64/OECD TG 422) is a standard information requirement under Annex VIII to REACH, if there is no evidence from analogue substances, QSAR or *in vitro* methods that the Substance may be a developmental toxicant. There is no information available in your dossier indicating that your Substance may be a developmental toxicant.

You have provided one key study and two supporting studies for this endpoint in your dossier:

i. A key study, assessing the effect of the Substance in various species (Effects of Excess Dietary Iodine upon Rabbits, Hamsters, Rats and Swine; R Arrington, RN Taylor Jr, CH Ammerman and RL Shirley, 1965); Guideline is to be equivalent to OECD 414: Pre-Natal Developmental toxicity screening test.
ii. A study assessing the effect of iodine on reproductive performance of female mink (RJ Aulerich, RK Ringer and GR Hartsough, 1978), with dosing with Potassium iodide (EC number 231-659-4).
iii. Another study assessing assessing the developmental toxicity and psychotoxicity of Potassium iodide (EC number 231-659-4) in rats (CV Vorhees, RE Butcher, and RL Brunner, 1984).

In your comments, you provided in addition to the information already submitted in your dossier:

iv. Some details of a repeated dose toxicity (28-day) study (OECD TG 407) "with extended parameters" performed on the Substance.

We have assessed the adequacy and reliability of the studies and we identified the following issues:

To be considered compliant and to generate information concerning the effects of the

Substance on male and female reproductive performance, such as gonadal function, mating behaviour, conception, development of the conceptus and parturition, the study has to meet the requirements of EU B.63/OECD TG 421 or EU B.64/OECD TG 422. The key parameters of this test guideline include, among others:

- The preferred species is the rodent and the highest dose level should aim to induce toxic effects;
- At least 10 male and 12-13 female animals for each test and control group;
- Examination of key parameters for toxicity such as clinical signs/ body weight, thyroid hormone assessment (P0 and F1), as well as examination of parameters for sexual function and fertility such as those for mating and fertility, duration of gestation, parturition, lactation and weight and histopathology of reproductive organs and tissues;
- Monitoring of oestrus cycles;
- Examination of offspring parameters such as number and sex of pups, stillbirths and live births, anogenital distance/number of nipples/areolae in male pups.

The studies you have provided were not performed according to the criteria of the EU B.63/OECD TG 421 or EU B.64/OECD TG 422, since:

- The study ii. was performed on a different species than rodent. Furthermore the highest dose level in the study iii. did not induce any toxicity and you have not shown that the aim was to induce toxicity. Therefore, the dose level selection was too low.
- The studies ii., iii. and iv. were not conducted with the required number of at least 10 male and 12-13 female animals for each test group. Therefore the statistical power of the information provided is not sufficient because the number of animals is too low (in studies ii. and iv.) or unspecified (in study iii.) or because the experiment did not contain male animals (in study iv.).
- In the key study i. no key parameters are reported for clinical signs or thyroid hormone assessment (P0 and F1) or for sexual function and fertility, such as those for mating and fertility, duration of gestation, parturition, lactation or weight and histopathology of reproductive organs and tissues. ; the same observation was made for study iv..
- Oestrus cycles have not been monitored (study iii.), nor have sperm measures been provided (key study i.).
- Investigations in the study (i. and iv.) for duration of gestation, number and sex of pups, stillbirths and live births, anogenital distance, number of nipples in male pups have not been performed.

The information provided does not cover key parameters required by the OECD TG 421 or 422.

Therefore, the information you provided do not fulfil the information requirement.

Information on study design

According to the test method EU B.63/OECD TG 421 or EU B.64/OECD TG 422, the study must be performed in rats with oral[6] administration of the Substance.

[6] ECHA Guidance R.7a, Section R.7.6.2.3.2.

Appendix C: Reasons to request information required under Annex IX of REACH

1. Sub-chronic toxicity study (90-day)

A Sub-chronic toxicity study (90 day) is a standard information requirement in Annex IX to REACH.

You have provided one key and two supporting studies for this endpoint in your dossier:

i. A repeated dose oral toxicity key study on the Substance (Sherer *et al.*, 1991).
ii. A repeated (21 days) dose oral toxicity study on the Substance in rats (Krari *et al.*, 1992).
iii. A repeated (28 days) dose oral toxicity study on the Substance in rats (Woodward and Berard, 1963).

In your comments you provided in addition to the information already submitted in your dossier, some details of:

iv. A repeated dose toxicity (28-day) study (OECD TG 407) performed on the Substance.
v. A subchronic study performed on the Substance in drinking water.

Although you do not explicitly claim an adaptation, ECHA understands that the studies may have been submitted in order to meet the required information by way of adaptation under Annex XI, Section 1.1.2. This adaptation rule enables registrants to claim that the data from experiments not carried out according to GLP or the test methods referred to in Article 13(3) can be considered equivalent to data generated by those test methods.

We have assessed this information and identified the following issues:

To be considered compliant and enable concluding whether the Substance has dangerous properties and supports the determination of the No-Observed Adverse Effect Level (NOAEL), a study has to meet the requirements of OECD TG 408. The following key parameter(s) of this test guideline include, among others: mortality, clinical observations (such as changes in skin, fur, eyes, mucous membranes, pilo-erection, lacrimation, changes in gait or posture, excessive grooming, ophthalmological examination, sensory reactivity to various stimuli and functional observations of the animals, recording of organ weights, detailed hematology, clinical biochemistry (to investigate major effects on liver and kidney), and pathology of sexual (male and female) organs, Full detailed gross necropsy and subsequent histopathology of both types tissues/ other.

You have submitted a key study i. performed with sodium iodide, and without a known test guideline. The Substance was given at doses of 0, 1, 3, 10, and 100 mg/l (0, 0.05, 0.15, 0.5 or 5 mg/kg/day). The treated animals were observed for body weight changes, hematology and were subjected to gross and histopathlogy.

Beside, you have not provided reporting for some of the examinations (including tables) and the related observations for studies iv. and v.

The studies ii., iii. and iv. were not performed according to the criteria of the OECD TG 408, because the duration of the studies was shorter than the one prescribed in the OECD TG 408, and since some key parameters , e.g. the examination of the animals for ophthalmological findings (studies iv. and v.), clinical biochemistry, behaviour, immunological findinds, organs weights (studies iv. and v.), within the gross necropsy of organs and tissues, including thyroid, sexual organs and observations of alterations (variations and malformations) were not performed or reported.

The adaptation rule in Annex XI, Section 1.1.2 imposes a number of cumulative conditions for an adaptation to be valid, in particular:

- Adequate and reliable documentation of the study is provided;

However, for sources of information i. to v. you have not reported the study details in a form of a robust study summary, as required by Article 10(a)(vii) and Article 3(28). This is depriving ECHA from being able to make an independent assessment and to conclude on the results of the studies.

Consequently the information you provided do not fulfil the information requirement.

2. Pre-natal developmental toxicity study in one species

A Pre-natal developmental toxicity (PNDT) study (OECD TG 414) in one species is a standard information requirement under Annex IX to REACH.

You have provided the same studies for this endpoint in your dossier as you have for the endpoint relevant to Annex VIII, Section 8.7.1 (both considered as key studies):

i. A key study (equivalent to OECD TG 421) assessing the developmental toxicity and psychotoxicity of Potassium iodide (EC 231-659-4) in rats (CV Vorhees, RE Butcher, and RL Brunner, 1984; reliability score of 2).
ii. A supporting study assessing the effect of one dose (2500 ppm) of the Substance in various species (Effects of Excess Dietary Iodine upon Rabbits, Hamsters, Rats and Swine; R Arrington, RN Taylor Jr, CH Ammerman and RL Shirley, 1965).

We have assessed the adequacy and reliability of the source studies and we identified the following issue:

In order to be considered compliant and enable assessing if the Substance is a developmental toxicant, the study has to meet the requirements of OECD TG 414. The key parameters of this test guideline include amongst others:

- The highest dose level should aim to induce some developmental and/or maternal toxicity
- 20 female rats with implantation sites for each test and control group,
- examination of the dams for weight and histopathology of the thyroid gland, gravid uterus weight, uterine content, body weight of the dams, clinical signs of the dams,
- examination of the foetuses for sex and body weight/external, skeletal and soft tissue alterations (variations and malformations), number of resorptions.

The studies i. and ii. were not performed according to the criteria of the EU B.63/OECD TG 421 or EU B.64/OECD TG 422, since:

- The highest dose level in study i. did not induce any toxicity and you have not shown that the aim was to induce toxicity. Therefore, the dose level selection was too low. Furthermore study ii. was performed with only one dose.
- The study ii. was performed on a different species than rodent. Furthermore, both studies i. and ii. were not conducted with the required number animals for each test group, as you have not provided the number of pregnant females for each test group. Therefore ECHA could not assess whether the statistical power of the information provided is sufficient and whether the criterion of pregnant females for each test group was fulfilled.
- In the study i., you not have provided any detailed information regarding the weight and histopathology, e.g. the thyroid gland, in the dams, gravid uterus weight has not been measured. In addition the uterine content has not been examined nor have the body weights or clinical signs of the dam.
- In study i. since the pups have been also administered the test material until day 90,you have not provided any information related to the examination of the foetuses, as required

in OECD TG 414 such as sex, body weight or external, skeletal and soft tissue alterations. There is also no information on number of resorptions or dead foetuses.

Therefore, the information you provided do not fulfil the information requirement.

3. Long-term toxicity testing on aquatic invertebrates

Long-term toxicity testing on aquatic invertebrates is a standard information requirement in Annex IX to the REACH Regulation.

You have provided a weight of evidence adaptation according to Annex XI, Section 1.2 relying on the following sources of evidence:

i. A 21-day Daphnia reproduction toxicity study on the source substance, Sodium fluoride (EC number 231-667-8), (R Kühn *et al.*, 1989, Water Research).
ii. A 21-day Daphnia reproduction toxicity study on the source substance, Sodium bromide (EC number 231-599-9), (R Kühn *et al.*, 1989, Water Research).

In your comments on the draft decision you have provided the following additional source of information for the weight of evidence adaptation:

iii. Long-term toxicity testing on aquatic invertebrates study (Dutch Standardization Organization NEN 6502 method) on the source substance Sodium bromide (EC number 231-599-9) (Food and Chemical Toxicology, 1983).

We have assessed this information and identified the following issues with the sources of information for your weight of evidence adaptation:

The sources of information i. to iii. provide relevant information relating to the parameters investigated in a study perfomed in accordance with OECD TG 211.

However, read-across is not reliable for i., ii, and iii. for the reason explained in section 1 of the Appendix on reasons common to several requests, and your grouping and read-across approach is rejected.

Therefore it is not possible to conclude, based on any source of information alone or considered together, whether your Substance has or has not the particular dangerous properties foreseen to be investigated in an OECD TG 211 study. Consequently, the information you provided do not fulfil the information requirement.

4. Long-term toxicity testing on fish

Long-term toxicity testing on fish is a standard information requirement in Annex IX to the REACH Regulation.

You have provided:

i. A QSAR prediction using ECOSAR.

While an adaptation was not specifically indicated by you, ECHA has evaluated the provided information under the rules set in Annex XI, Section 1.3. Qualitative or quantitative structure-activity relationship (QSAR), and has identified the following issue.

In your comments on the draft decision you have provided an adaptation under Annex XI, Section 1.2. of REACH (weight of evidence) with the following supporting information:

ii. Long-term toxicity testing on *Oryzias latipes* and *Poecilia reticulate* (Dutch Standardization Organization method) on the source substance Sodium bromide (EC number 231-679-3) ([redacted] 1983).

iii. Long-term toxicity testing on fish (OECD TG 210) on the source substance Sodium fluoride (EC number 231-667-8) (study not referenced).
iv. 22-day study in *Salmo gairdneri* with the Substance administered by injection [redacted] (1986).

We have assessed this information and identified the following issues:

a) Adaptation according to Annex XI, Section 1.3 (QSAR) in the dossier.

Annex XI, Section 1.3. states that results obtained from valid QSAR models may be used instead of testing when the following cumulative conditions are met, in particular:
- the substance falls within the applicability domain of the QSAR model;
- adequate and reliable documentation of the applied method is provided.

According to ECHA's Practical guide "How to use and report (Q)SARs", section 3.4, a QSAR Model Reporting Format (QMRF) and a QSAR Prediction Reporting Format (QPRF) are required to establish the scientific validity of the model, to verify that the Substance falls within the applicability domain of the model, and to assess the adequacy of the prediction for the purposes of classification and labelling.

You have not provided any documentation for the QSAR prediction. In particular, you have not included a QMRF and/or a QPRF in your technical dossier.

Therefore, ECHA cannot establish whether the model is scientifically valid and whether the Substance falls within the applicability domain of the model. In addition we note that ECOSAR applies to organic substances, whereas sodium iodide is an inorganic salt.

Therefore, your adaptation is rejected and the information requirement is not fulfilled.

b) Adaptation according to Annex XI, Section 1.2 (weight-of-evidence) in your comments.

To fulfil the information requirement, normally a study performed according to OECD TG 210 must be provided. OECD TG 210 requires the study to investigate parameters related to the survival and development of fish in early life stages from the stage of fertilized egg until the juvenile life-stage following exposure to the test substance are measured, including:
1) the stage of embryonic development at the start of the test, and
2) hatching of fertilized eggs and survival of embryos, larvae and juvenile fish, and
3) the appearance and behaviour of larvae and juvenile fish, and
4) the weight and length of fish at the end of the test.

The source of information iv. does not provide relevant information because in the study dosing of the fish is by injection, i.e. this study does not examine the effects from exposure in water.

The source of information i. provides relevant information, but there are deficiencies affecting its reliability, as described above.

The sources of information ii. and iii. provide relevant information However, read-across is not reliable, as described in section 1 of the Appendix on Reasons common to several requests, and your grouping and read-across approach is rejected.

Therefore it is not possible to conclude, based on any source of information alone or considered together, whether your Substance has or has not the particular dangerous

properties foreseen to be investigated in an OECD TG 210 study. Consequently, your adaptation is rejected and the information requirement is not fulfilled.

Appendix D: Requirements to fulfil when conducting and reporting new tests for REACH purposes

A. Test methods, GLP requirements and reporting

1. Under Article 13(3) of REACH, all new data generated as a result of this decision must be conducted according to the test methods laid down in a European Commission Regulation or to international test methods recognised by the Commission or ECHA as being appropriate.

2. Under Article 13(4) of REACH, ecotoxicological and toxicological tests and analyses must be carried out according to the GLP principles (Directive 2004/10/EC) or other international standards recognised by the Commission or ECHA.

3. Under Article 10(a)(vi) and (vii) of REACH, all new data generated as a result of this decision must be reported as study summaries, or as robust study summaries, if required under Annex I of REACH. See ECHA Practical Guide on How to report robust study summaries[7].

B. Test material

Before generating new data, you must agree within the joint submission on the chemical composition of the material to be tested (Test Material) which must be relevant for all the registrants of the Substance.

1. Selection of the Test material(s)

   The Test Material used to generate the new data must be selected taking into account the following:
   - the variation in compositions reported by all members of the joint submission,
   - the boundary composition(s) of the Substance,
   - the impact of each constituent/ impurity on the test results for the endpoint to be assessed. For example, if a constituent/ impurity of the Substance is known to have an impact on (eco)toxicity, the selected Test Material must contain that constituent/ impurity.

2. Information on the Test Material needed in the updated dossier
   - You must report the composition of the Test Material selected for each study, under the "Test material information" section, for each respective endpoint study record in IUCLID.

This information is needed to assess whether the Test Material is relevant for the Substance and whether it is suitable for use by all members of the joint submission.

Technical instructions on how to report the above is available in the manual on How to prepare registration and PPORD dossiers[8].

[7] https://echa.europa.eu/practical-guides
[8] https://echa.europa.eu/manuals

Appendix E: General recommendations when conducting and reporting new tests for REACH purposes

A. Testing strategy for aquatic toxicity testing

You are advised to consult ECHA Guidance R.7b, (Section R.7.8.5) which describes the Integrated Testing Strategy, to determine the sequence of aquatic toxicity tests and testing needed.

Appendix F: Procedure

This decision does not prevent ECHA from initiating further compliance checks at a later stage on the registrations present.

ECHA followed the procedure detailed in Articles 50 and 51 of REACH.

The compliance check was initiated on 18 June 2019.

ECHA notified you of the draft decision and invited you to provide comments.

ECHA took into account your comments and did not amend the requests.

ECHA notified the draft decision to the competent authorities of the Member States for proposals for amendment.

As no amendments were proposed, ECHA adopted the decision under Article 51(3) of REACH.

Appendix G: List of references - ECHA Guidance[9] and other supporting documents

Evaluation of available information
Guidance on information requirements and chemical safety assessment, Chapter R.4 (version 1.1., December 2011), referred to as ECHA Guidance R.4 where relevant.

QSARs, read-across and grouping
Guidance on information requirements and chemical safety assessment, Chapter R.6 (version 1.0, May 2008), referred to as ECHA Guidance R.6 where relevant.

Read-across assessment framework (RAAF, March 2017)[10]

RAAF - considerations on multiconstituent substances and UVCBs (RAAF UVCB, March 2017)[11]

Physical-chemical properties
Guidance on information requirements and chemical safety assessment, Chapter R.7a (version 6.0, July 2017), referred to as ECHA Guidance R.7a in this decision.

Toxicology
Guidance on information requirements and chemical safety assessment, Chapter R.7a (version 6.0, July 2017), referred to as ECHA Guidance R.7a in this decision.

Guidance on information requirements and chemical safety assessment, Chapter R.7c (version 3.0, June 2017), referred to as ECHA Guidance R.7c in this decision.

Environmental toxicology and fate
Guidance on information requirements and chemical safety assessment, Chapter R.7a (version 6.0, July 2017), referred to as ECHA Guidance R.7a in this decision.

Guidance on information requirements and chemical safety assessment, Chapter R.7b (version 4.0, June 2017), referred to as ECHA Guidance R.7b in this decision.

Guidance on information requirements and chemical safety assessment, Chapter R.7c (version 3.0, June 2017), referred to as ECHA Guidance R.7c in this decision.

PBT assessment
Guidance on information requirements and chemical safety assessment, Chapter R.11 (version 3.0, June 2017), referred to as ECHA Guidance R.11 in this decision.

Guidance on information requirements and chemical safety assessment, Chapter R.16 (version 3.0, February 2016), referred to as ECHA Guidance R.16 in this decision.

Data sharing
Guidance on data-sharing (version 3.1, January 2017), referred to as ECHA Guidance on data sharing in this decision.

OECD Guidance documents[12]

[9] https://echa.europa.eu/guidance-documents/guidance-on-information-requirements-and-chemical-safety-assessment
[10] https://echa.europa.eu/support/registration/how-to-avoid-unnecessary-testing-on-animals/grouping-of-substances-and-read-across
[11] https://echa.europa.eu/documents/10162/13630/raaf_uvcb_report_en.pdf/3f79684d-07a5-e439-16c3-d2c8da96a316
[12] http://www.oecd.org/chemicalsafety/testing/series-testing-assessment-publications-number.htm

Guidance Document on aqueous-phase aquatic toxicity testing of difficult test chemicals – No 23, referred to as OECD GD 23.

Guidance document on transformation/dissolution of metals and metal compounds in aqueous media – No 29, referred to as OECD GD 29.

Guidance Document on Standardised Test Guidelines for Evaluating Chemicals for Endocrine Disruption – No 150, referred to as OECD GD 150.

Guidance Document supporting OECD test guideline 443 on the extended one-generation reproductive toxicity test – No 151, referred to as OECD GD 151.

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Appendix H: Addressees of this decision and the corresponding information requirements applicable to them

You must provide the information requested in this decision for all REACH Annexes applicable to you.

Registrant Name	Registration number	Highest REACH Annex applicable to you
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]

Where applicable, the name of a third party representative (TPR) may be displayed in the list of recipients whereas ECHA will send the decision to the actual registrant.