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# SAFE Position Paper on:

# The Proposed Omission of the Declaration of Iodised Salts' Ingredients and Iodised Salt's Exemption from the Mandatory Nutritional Declaration

## About SAFE-Safe Food Advocacy Europe:

SAFE is a non-profit European independent organisation based in Brussels, in charge of improving the representation of ordinary citizens in the EU debate concerning the future of EU food legislation. SAFE members are consumer associations, vegan and vegetarian associations spread across different EU countries. The core mission of SAFE is to influence the future of European food legislation in favour of European consumers' interest through policy advocacy and outreach.

In a lifetime, an average 80- years-old consumer ingests 30 to 60 tons of food. The dominant impact of nutrition on our health and well- being can thus not be ignored. Several reputable scientific studies underline how the large- scale industrialisation of food and industrial agriculture are among the main causes of the increase of serious diseases, such as obesity, diabetes, cancer, Alzheimer, and many more.

EU food legislation is influenced by agro food industries lobbying which could have an adverse influence on EU consumers' safety. There is thus a need for an independent organisation in charge of improving consumer protection in the EU food safety system.

SAFE will act as a force to strengthen the voice of the consumer interests in civil society and contribute to reinforcing participatory democracies in Europe. More information available on **www.safefoodadvocacy.eu**

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STRIVING FOR SAFER FOOD FOR EUROPEAN CONSUMERS

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## SAFE Position:

On 22nd September 2015, the food industry put the omission of iodised salt's ingredients from food labels, on the agenda of a meeting of the European Commission's Advisory Group on the Food Chain and Animal and Plant Health, discussing the fitness check of Regulation (EC) No 178/2002 on General Food Law.

Regulation (EU) No 1169/2011 on the provision of food information to consumers requires iodised salt's composition **i.e potassium iodate, sodium iodate, potassium iodide, sodium iodide and possibly their combination** to be detailed on the label of final foodstuffs as it is a compound component. The industry proposes to only indicate 'iodised salt' instead as they consider the former information irrelevant to consumers and costly, iodine sources constantly changing with suppliers.

In addition, a recent position letter by the European Salt Producers' Association proposed to exempt iodised salt from the mandatory nutritional declaration which is currently required by Article 50 (3) of Regulation (EU) No 1169/2011 for vitamins and minerals added to food. This would entail including iodised salt under Annex V to Regulation (EU) No 1169/2011 which allows some ingredients to be exempted from the nutritional declaration. In the industry's view this should be applied to fortified salt as, apart from salt which would naturally be high, the energy value fat, saturates and sugars would be equal to zero and thus of no use to consumers.

**SAFE's key concerns on the proposed omission of the declaration of iodised salts' ingredients and iodised salt's exemption from the mandatory nutritional declaration are summarised below:**

### I. A statement on the importance of declaring the specific sources of iodine on food labels;

SAFE strongly objects to the food industry's suggestion to remove iodised salt's detailed composition from food labels. To incorporate a vague statement such as 'iodised salt' instead would deprive consumers of vital information concerning the form of iodine used in the salt, potentially jeopardising their safety.

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A. <u>Some of iodine's most popular forms can be hazardous for patients under certain types of medications.</u>

The Natural Medicines Comprehensive Database[1] which provides benchmark evidence based clinical information on natural medicines states that **potassium iodide** taken with the medications below may pose the following health risks:

**Hyperkalemia:** Hyperkalemia i.e increased potassium in the blood can be caused in **hypertensive** consumers taking potassium iodide with **blood pressure medicines** such as **benazepril (Lotensin), lisinopril (Prinivil and Zestril), and fosinopril (Monoprilcan)**. These medications are **ACE inhibitors** that can cause potassium levels to rise in the blood. Taking potassium iodide together with these medications would thus lead to an **additive effect**. Potassium iodide can also lead to hyperkalemia in patients with low blood pressure when ingested with **potassium diuretics** like **spironolactone (Aldactone)**. Such medications are used to increase urine flows and therefore **decrease the body's excretion of potassium**.

**Hypothyroidism:** Finally, hypothyroidism i.e insufficient production of hormones can occur if potassium iodide interacts with the medication **lithium (Lithobid)**. Indeed lithium has an **inhibitory effect on thyroid function** whilst iodine may have a **cumulative hypothyroid effect**.

B. <u>Some of Iodine's most popular forms can interact with chlorinated drinking water and lead to the formation of iodoacetic acids:</u>

A study by Becalski et al (2007) investigated the interaction of table salt iodised (with potassium iodide) at the level of 100mgkg−1 and chlorinated tap water in Ottawa, Canada. Results showed that when **chlorinated tap water** is **boiled with 2g l −1 of iodised table salt** for 5 or 10 minutes as occurs during cooking process, it generates **iodoacetic and chloro- iodoacetic acids**. The same effect was also obtained

when chlorinated water with iodised salt was left at room temperature for an extended period of time. Iodoacetic acid in particular is a toxic compound which evidence has revealed to be **genotoxic and cytotoxic** in mammalian cells. Lab studies have also shown **developmental malformations** caused by iodoacetic acid in mouse embryos. In this study the concentration of iodoacetic acid was in the 1.5 mg l−1 range, making iodised salt a low risk source of iodoacetate mutagenic/ genotoxic

[1] **Natural Medicines Comprehensive Database (2015)**

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contamination. Nonetheless these low risks should not be neglected as they concern the safety of consumers.

**In light of the above, it is essential that the details of iodised salt's composition i.e its mineral forms remain compulsory on the labels of processed food, as required by Regulation (EU) No 1169/2011, to protect consumers from the potential hazardous effects of iodine ingredients such as potassium iodide.**

II. **A statement calling for the maintenance of the nutrition declaration for iodised salt;**

Similarly, we call for the full nutritional declaration of iodised salt on labels. The absence of information on the iodine content level of iodised salt would pose an important safety issue for consumers putting them at risk of ingesting excessive amounts of iodine. The World Health Organisation (WHO) recommends a safe iodine dietary intake of 100 µg day−1 for infants and 150 µg day−1 for adults[2]. The European Food Safety Authority (EFSA) sets its tolerable upper intake level at 150µg per day for adults and 250 µg per day for pregnant and breastfeeding women[3]. Iodised salt is generally not perceived as having high concentrations of iodine with iodine content usually varying from 10–75 mg/kg and most iodised salt containing 15–30 mg/kg of iodine[4]. However:

A. **Consumers could be put at risk of excess if they consume large quantities of iodised salt and/or other rich iodine sources;**

Considerable evidence from studies with lab animals and humans suggests that excessive amounts of iodised salt can lead to illnesses ranging from benign thyroid disorders to thyroid cancer. Individuals with **thyroid disorders as well as pregnant women, the elderly, foetuses and neonates** have all been reported to be populations with specific risk factors for whom **excessive iodine intake increases vulnerability to disorders like goitre, nodules,hypothyroidism, hyperthyroidism etc**[5].

[2] World Health Organisation (1996)

[3] European Food Safety Authority (2014)

[4] Ibid.

[5] Leung, A. and Braverman, L (2014)

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**Hyperthyroidism:** High ingestion of iodine can cause thyroid dysfunction by leading to hyperthyroidism (excessive production of thyroid hormone) or hypothyroidism (insufficient production of thyroid hormone). Hyperthyroidism also known as the **Jod Basedow phenomenon** was first seen to occur in patients with long term goiter, when

supplemented with iodine, compared to individuals without goiter[6]. The DanThyr which is a longitudinal population-based study monitoring the Danish iodine fortification program introduced in 2000 further provides evidence of links between excess iodine and hyperthyroidism[7]. Part of the evaluation included registering the incidence of overt hyper- and hypothyroidism in a sample of 550 000 people living in two areas. A 50% increase in new cases of hyperthyroidism was observed in the area most lacking in iodine after increasing intake. Participants most at risk in this study had **graves disease** but other risk factors as illustrated above also include **severe iodine deficiency, and goitre**.

**Hypothyroidism:** Links between larges doses of iodine and **hypothyroidism i.e the Wolff-Chaikoff** effect were first observed in a lab study of rats after the latter experienced a momentary reduction in the synthesis of thyroid hormones[8]. Meanwhile, in Spain, a cross-sectional study revealed that **pregnant women** ingesting iodine doses of ≥200 had greater risk of hyperthyrotropinemia (congenital hyphothyroidism) compared with participants having doses of <100mcg/day[9]. Finally increased prevalence of subclinical hypothyroidism due to iodine excess is also supported by findings of a randomised control trial of >200 Chinese adults[10]. Indeed hypothyroidism was more common, among participants given 400 µg iodine tablets compared to controls given placebo.

**Thyroid Cancer:** Associations between high iodine intake and thyroid cancer are significantly weaker. Numerous confounding factors affect evidence obtained from

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[6] **Ibid.**

[7] **Laurberg, P. et al (2006)**

[8] **Leung, A. and Braverman,, L (2014)**

[9] **Rebagliato, M. et al (2010)**

[10] **Sang, Z. et al (2012)**

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population studies (differing time periods,examination techniques etc)[11] Nonetheless the introduction of nationalised programs on iodised salts clearly seems to coincide with an **increased incidence of papillary thyroid cancer in many countries**[12]. In China for example, the incidence of thyroid cancer increased between 1997 and 2002 whilst iodised salt was introduced as a national intervention in 1996[13].

In northwestern Spain, a retrospective study reported a rise in the rates of thyroid cancer after comparing the years before and after the introduction of iodised salt[14]. The papillary thyroid cancer:follicular thyroid carcinoma ratio increased from 2.3 to 11.5. Interestingly, females in particular seemed more at risk of developing thyroid cancer with new case increasing from 1.56/100,000 between 1978 to 1985 to 8.23/100,000 between 1994 to 2001. Last but not least, animal studies in a review of iodine intake as a risk factor for thyroid cancer further conclude that iodine excess may be a **weak promoter of thyroid carcinogenesis**[15]. In a lab study of rats exposed to carcinogens and iodine deficient/rich diets for example, DHPN-treated rats experienced increased thyroid follicular tumors when receiving either excessive or insufficient quantities of iodine[16].

**B. Consumers with Mast Cell Activation Syndrome (MCAS) could be put at risk of infectious diseases:**

Another major reason why the nutritional declaration should be maintained on iodised salt labels is to inform people with the **Mast Cell Activation Syndrome** (MCAS) about levels of iodine. MCAS occurs due to the presence of high /genetically modified mast cells and affects all of the body's systems including the skin, gastrointestinal, cardiovascular, respiratory, and neurologic systems. Very small doses of iodine however can trigger the release of **mast cell mediators** which may

[11] **Zimmermann, M. and Galetti, V (2015)**

[12] **Ibid.**

[13] **Ibid.**

[14] **Rego-Iraeta, A. et al (2009)**

[15] **Zimmermann, M. and Galetti, V (2015)**

[16] **Ibid.**

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in turn increase vulnerability to infectious diseases, allergies and autoimmmune disorders[17].

**We thus urge for the full nutritional declaration to be provided for iodised salt, with a clear indication of the level of iodine contained in the salt, to avoid european consumers's exposure to iodine levels that could threaten their health.**

## Conclusion:

SAFE calls for the declaration of iodine's mineral forms to be maintained on the list of ingredients of processed foods. It is pivotal for labels to provide clear visible and detailed information on iodine sources as european consumers should be able to make informed choices on the composition of iodised salt to protect them from the risks of adverse health impacts associated with certain types of iodine. Likewise, we consider that iodised salt should not be exempted from the mandatory nutritional declaration. It is imperative for consumers to know the level of sodium in their salt to be able to pick healthier alternatives. More importantly, as evidenced above, the nutritional declaration should remain mandatory for iodised salt as it is vital for european consumers to known the iodine concentration level of their table salt. To inform their diet choices and avoid intake of potentially hazardous levels of iodine. Iodine content level should be clearly expressed and easily detectable on the label for consumers to prevent disorders linked to iodine intake.

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