

NATCOL position regarding ISO TS 19657:2017 *Definitions and technical criteria for food ingredients to be considered natural*

Introduction

The use of the term “natural” and related terms are an observable global marketing trend used in labelling and advertising. To clarify the term “natural” from a supply chain perspective, the ISO Technical Specification (TS) 19657:2017 on *Definitions and technical criteria for food ingredients to be considered natural* is intended to help the food and beverage industry “*to assure a level playing field and fair practices in business to business relationships*”. It was voted to be published as a TS in 2017 by the Technical Committee TC 34 of ISO with 39 votes in favour, 26 abstentions and 2 votes against. Seven TC 34 members did not cast a vote. Per ISO procedures, the TS must be reviewed latest after 3 years, and potentially after 6 years. Purpose is to reach a level of consensus on the content and usefulness so that the TS can be advanced to a full ISO standard. This must happen latest after 6 (3 + 3) years, otherwise the endorsement as a TS will be completely withdrawn. The TS can be applied on a voluntary basis, it is not legally binding in any way.

The TS pursues a binary approach for the categorization of food ingredients on the basis of technical criteria to either qualify a food ingredient to be considered as “natural” or not. The TS is intended for use in business to business communication only. It is not intended “*to provide information to consumers ...as consumer expectations vary widely around the world and from product to product*”. Furthermore, the TS encourages the food industry to develop sector specific interpretations of the ISO TS in consistency with the ISO TS. Flavourings, natural mineral waters and bottled drinking waters which are covered by Codex Alimentarius standards/guidelines are not in scope. Food colours however are principally in scope.

It is a common practice that certain food ingredients, and in particular flavourings and food colours, are specifically highlighted (e.g. “no artificial colours”) with voluntary marketing claims on food labels. NATCOL members developed an industry guidance for business to consumers communication regarding the use of natural claims on finished food labels in respect to food colours. This guidance document had been endorsed and published by NATCOL in April 2013.

In this position NATCOL assesses the ISO TS, compares it against the existing NATCOL *Position on the Term ‘Natural Colour’ and the Categorization of Food Colours* and gives guidance to its members and the food industry whether it is advisable to apply the ISO TS also to food colours. This document represents NATCOL views only.

Discussion

In this section, we follow the structure of the ISO TS document, looking to section one (1) (Scope) and four (4) Technical criteria. Section two (2) (Normative references) and three (3) (Terms and definitions) are not of particular relevance for the discussion.

Scope

The scope of the ISO TS clarifies that it applies to business to business communication only and not to communication to consumers. A justification is provided in the Introduction of the TS arguing that consumer expectations vary widely around the world.

As mentioned in the introduction to this document, for food colours (and similarly for other food ingredients) there is a continuous market request to inform final consumers about the naturalness of food ingredients. This calls in particular for guidance on business to consumer communication. The ISO TS does not provide any guidance how to translate the “business to business” natural assessment based on the purely technical criteria of the ISO TS into an easily understandable message for consumers. Humans have an innate sense for naturalness in various contexts, and this perception judgement of naturalness is certainly complex, depends on a variety of factors and allows humans to make personal judgements when comparing things to be more or less natural. The binary approach taken by the ISO TS (natural Yes/No) for the business to business approach seems to be standing in contrast to what is needed for business to consumer communication. The NATCOL guidance does not follow a binary approach but focuses on suggesting short but truthful and understandable pieces of information about the different colours in relation to voluntary label claims on finished food labels.

Technical criteria

The ISO TS divides the technical criteria in an assessment of the source materials and the applied processes. Processes are assessed on the basis of a high level process qualification (physical, enzymatic, microbiological processes). The ISO TS does not provide a positive list of processes acceptable under the ISO TS natural concept. NATCOL supports the absence of a list of processes and believes that it is important to assess the intention of the use of a process and its effect on a food ingredient rather than looking to processes in isolation without viewing them in a context.

NATCOL also notes that the ISO TS intends to limit chemical reactions. The criteria under point 4.b) allow intentional chemical reactions if they are enzymatically catalysed and/or get accomplished by the use of microorganisms. In addition, the enzymatic reactions are further restricted as enzymatically catalysed chemical reactions *shall not* be used to produce substances that do not occur in nature. The same restriction applies to microbiological processes which appears to be redundant as the TS already allows microorganisms as an acceptable natural source.

More importantly, with the phrase “*food ingredients shall be obtained from source materials by physical...processing*”, the TS seems to allow chemical reactions to occur and chemical substances to form, whether or not occurring in nature, provided those chemical reactions/conversions are related or initiated by a physical process which could be attributed to them, such as heating.¹

NATCOL is of the view that the intention behind this allowance of chemistry might be to accommodate for some traditional practices, e.g. in relation to the Maillard reaction. Nevertheless NATCOL believes that such allowance is likely in conflict with the concept of assuring a level playing field and fair practices, and also contradicts the idea of applying only technical criteria. In addition, NATCOL endorses “occurrence in nature” as a fundamental principle in its own guidance. The ISO TS in contrast endorses this criterion only “half way” at best and introduces an undue discrimination between processes which NATCOL does not support in this form.

Finally, a very important aspect is missing in the ISO TS technical criteria. A common concept that can be found in existing authority guidance for natural labelling on food products², and which applies to food processing, is expressed in the following question: to what extent does a given process/processing step alter the original state of the starting material?

And the reason for this question is the fact that all food processing can only deprive of “naturalness”. Food processing ranges from very simple processing to complex multiple step processes and all processes have in common that:

- they can only lower the perception of naturalness
- they differ in their impact on the perceived loss of naturalness
- the perception of the impact on the loss of naturalness of a given process depends on the context in which that process is applied

The ISO TS does not make use of this concept. The NATCOL guidance however principally makes use of this concept by recognizing degrees of naturalness based on a food colour categorization N1-N2-N3 and deriving nuanced labelling options from this which do not follow this simple natural Yes/No scheme. For example, in the NATCOL classification for colours in category N1, the process applied must not modify the chemical nature of the colouring principle. For colours in category N2, which are already a little more deprived of naturalness, the process must not modify the chemical nature of the chromophore.

Lastly, the ISO TS states that in the case of compound food ingredients, “...*each food ingredient shall meet the technical criteria of this document...*”. While this is as such needless to say, the ISO TS nevertheless wants to highlight the relevance of formulation ingredients in preparations (e.g. colour preparations containing the colour and carrier ingredients) in the “natural” context. In the NATCOL position this aspect has as well been taken care of, however from the more practical business to consumer labelling perspective (section 4.2 in the NATCOL position).



Conclusion

NATCOL takes note of the new ISO TS 19657:2017 *on Definitions and technical criteria for food ingredients to be considered as natural* and encourages members to read this document.

Food colours are principally covered by the scope of the ISO TS. Food colours are different though from the majority of other food ingredients, in so far as they are frequently subject to voluntary labelling options on food packaging/labelling with claims such as “*no artificial colours*”.

The ISO TS is explicitly limited to business to business communication only and excludes business to consumer communication from its scope. The ISO TS does not take into account any regional/local guidance from food authorities in relation to the use of natural claims in business to consumer communication. The NATCOL position was in particular benchmarked against relevant European regulation and EU member states guidance. The technical criteria set by the ISO TS are at least partly ambiguous and likely lead to assessments where certain food ingredients (food colours included) unduly qualify to be considered natural while others may unduly get disqualified. Thus, in practice, the technical criteria are likely to be in conflict with one of the intentions of the ISO TS, i.e. *to assure a level playing field and fair practices in business to business relationships*.

The ISO TS pursues a binary naturalness assessment (natural Yes/No) while NATCOL makes a more differentiated assessment of food colours, recognizing degrees of naturalness (colour categories N1-N3) and therefrom derives options for a nuanced labelling that is informative, truthful and not misleading. The ISO TS intends to encompass the full diversity of food ingredients while the NATCOL position is more precise and focused on food colours only.

Finally, the ISO TS encourages the food ingredient sectors to develop sector specific interpretation of the ISO TS guidance. Due to the need on the market, NATCOL has accomplished this long before the ISO TS had been published and believes that this guidance is relevant and appropriate for the market needs. NATCOL encourages continued use of its Natural position (guidance) and believes that it is a sector specific interpretation of the ISO TS.

This NATCOL position does not intend in any way to judge the appropriateness or usefulness of any future initiative (public/private, voluntary/compulsory) to define “natural food ingredients”.

Footnote 1: This interpretation was the intended understanding of the ISO working group responsible for this ISO technical specification. This interpretation had also been confirmed (in 2018) by the convener of this ISO working group in writing to a member company of NATCOL.

Footnote 2: The Gold Standard: Only what nature provides is natural

This notion is reflected upon by national authorities that published any sort of guidance on this topic. The USA FDA expressed the view that “*it is difficult to define a food product that is “natural” as the food has probably been processed and is no longer the product of the earth*”. The Canadian Food Inspection Agency talks about foods submitted to processes “*that have significantly altered their original physical, chemical or biological state*” and uses process describing language that considers them to “*affect the natural character of a food/food ingredient concerning physical, chemical and biological changes*”. The UK FSA guidance uses words such as “*produced by nature, not the work of man or interfered with by man*” to convey the concept of naturalness in their guidance. In a summary table of terminology, they explain that “*not interfered with by man*” among others means “*foods or ingredients that are as in nature*”. It is among others because of this “gold standard” understanding of naturalness that authorities stress that qualifying language such as “*from natural source*” should rather be used for food ingredients and not simply “*natural*”. NATCOL follows this approach. 4/4