

Preparation of The Certification According to IFS Global Markets Food in The Landshuter Brauhaus AG Private Brewery for The Location Ellermühle

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Abstract:

The objective of this article is to prepare for the initial certification according to IFS Global Markets Food V3 at the Landshuter Brauhaus AG private brewery at the Ellermühle site, which is expected in August 2025, and to create the basis for a potential follow-up certification according to IFS Food. The IFS Global Markets Food Program V3 is a standardized, voluntary and non-accredited assessment program for food companies, both for retail and manufacturer brand products (IFS 2023, p. 10 f.). It is based on the specifications of the Global Markets Program developed in 2008 (GFSI 2023a; VDOE 2020, p. 620).

The methodology of the target/actual analysis was used to work on the topic in order to be able to carry out a conformity check with regard to the requirements of IFS Global Markets Food V3 (see Appendix 3; IFS 2023). Observations, document analyses and employee surveys were carried out to obtain the most meaningful information possible. These have been recorded and evaluated within the target-performance analysis. A total of 65 deviations (equivalent to 53.7%) were identified at the basic level, and 60 deviations (equivalent to 82.2%) at the intermediate level. These were either processed as directly implemented corrective actions or formulated as recommendations for continuous improvement in the form of an action plan (see Appendix 15). The presentation of the action plan shows the deviations, the resulting measures, the associated responsibilities, the time period with the starting point and end point of the measures, and the current status.

In addition a subdivision into "Basic" and "+Intermediate" was made for a better overview in the subsequent processing by the brewery.

A review as well as assessment of relevant requirements with regard to processes and significant violations after completion of the new building and commissioning at the Ellermühle site with regard to correlation with a potential "major" rating is recommended on the part of the operations manager or brewmaster (IFS 2023, p. 30).

After successful implementation of all recommendations of the basic level from the action plan, certification of the IFS Global Markets Food V3 at the basic level should be possible after completion of the Ellermühle site in August 2025. After subsequent processing of the action plan at the intermediate level, certification of IFS Global Markets Food V3 at the next higher level could then take place in the following year, August 2026.

Keywords: *Standards, certification, program, brewery, food safety, quality management*

1 Introduction

This paper is the result of a master's thesis in collaboration with Landshuter Brauhaus AG Privatbrauerei as part of an internship. The basis of the work is the preparation for the upcoming initial certification according to IFS Global Markets Food of the above-mentioned brewery.

2 Problem definition

The aspect of food safety is becoming increasingly important for consumers nowadays - and this also applies to beer. In 2014, for example, a total of 24 German beer brands tested were found to contain microplastic particles (LIEBEZEIT 2014). The resulting demand for norms, standards and seals along the supply chain is constantly growing. Intermediaries and supermarkets, such as Edeka Handelsgesellschaft, are also demanding greater transparency and control from manufacturers. However, meeting the requirements of important norms and standards for food safety poses numerous challenges for small companies and private breweries. A partial lack of mutual acceptance and knowledge transfer in the supply chain and the laborious access to local supply chains pose additional difficulties for smaller companies (IFS 2023, p. 10 f.). The requirements catalogs of conventional certification systems are not geared towards smaller companies, nor are there sufficient human resources available to successfully implement the requirements and the certification process (VDOE 2020, p. 619).

3 Landshuter Brauhaus

The topic of this paper was developed, as the newly planned Ellermühle site, including the requirements according to IFS Global Markets Food, is to be completed and certified (ZELLNER 2022). The Landshuter Brauhaus AG private brewery is a medium-sized company with 32 employees. The newly planned Ellermühle site is due to

be completed by August 2025 (ZELLNER 2023). The Ellermühle site covers 17,212 m² and is located within the city district of Landshut with good transport connections. The new site should ensure sufficient production capacity, storage capacity for the products to be manufactured and premises for the head office at the same location.

4 Objective

The aim of this work is to prepare for the initial certification according to IFS Global Markets Food V3 at the Landshuter Brauhaus AG private brewery at the Ellermühle site, which is expected in August 2025, and to create the basis for a potential follow-up certification according to IFS Food. The IFS Global Markets Food Program V3 is a standardized, voluntary and non-accredited assessment program for food companies, both for retail and manufacturer brand products (IFS 2023, p. 10 f.). It is based on the specifications of the Global Markets Program developed in 2008 (GFSI 2023; VDOE 2020, p. 620). The final goal, after taking into account all corrective measures, is to pass the certification and thus to introduce a management system for food quality and safety that meets the requirements of the assessment program.

5 IFS Global Markets Food

IFS Global Markets Food V3 is a development program. The requirements of the IFS Global Markets Food Development Program - as part of the Global Markets Assessment - can be divided into five areas: Governance and Engagement, Food Safety and Quality Management, Resource Management, Operations, and Measurement, Analysis and Improvement (IFS 2022; IFS 2023, p. 49 ff.; KRIEGER-GÜSS, HANNUS 2024). The program itself is divided into the chronologically consecutive phases Basic (B), Intermediate (I) and IFS Food Standard, whereby each phase should ideally last no longer than one year (IFS 2023, p. 15; VDOE 2020, p. 620). Complete fulfillment of the requirements from the basic level corresponds to a percentage of 45% of the IFS Food requirements and from the intermediate level to a percentage of 70% depending on the degree of complete fulfillment, i.e. 100% of the IFS Food requirements (IFS 2023, p. 15). The IFS Food Standard is a certification model recognized by the GFSI with selected minimum requirements in the food sector (SCHMIDT 2016, p. 9). Depending on the level of food safety and quality management already established by the company and after a voluntary pre-assessment with external support, the company starts at the basic level or can skip this and start directly at the intermediate level (VDOE 2020, p. 620). As an alternative to the pre-assessment with external support, a self-assessment carried out by internal staff to determine the status quo is also possible (VDOE 2020, p. 621).

IFS-accredited certification bodies, such as TÜV, are permitted to certify companies according to the IFS standard. Officially IFS-approved, qualified auditors check the extent to which the requirements of the IFS standards are implemented (ULLMER 2014, p. 101). Within an IFS Global Markets Food assessment, the implementation of a company with regard to the requirements of IFS Global Markets Food is checked by an auditor and points are awarded from 20 to 0 according to a predefined rating scheme from A to D (see Table 1). In addition to awarding points, points can also be deducted in the event of non-conformity using the "Major" rating. If a requirement is assessed as "Major", the possible total number of points is reduced by 10%. The maximum limit of a single non-

conformity applies here. In the event of a further assessed "major", the certification is deemed not to have been passed and must be repeated if necessary. Requirements that do not apply to the company can be assessed as not applicable (N/A) and therefore excluded from the overall score. A rating of N/A requires a brief explanation from the assessor in the assessment report (IFS 2023, p. 30 f.).

Result	Declaration	Points
A	Full Compliance	20
B	Almost full compliance	15
C	Part of the requirement is not implemented	5
D	The requirement is not implemented	0

Table 1: Assessment of the requirements according to IFS Global Markets Food (based on IFS 2023, p. 30).

Version 3 of the IFS Global Markets Food program will be mandatory as of October 2023, so the initial certification for the brewery will be prepared for the latest version (IFS 2023, p. 10).

6 Method

The target/actual analysis methodology is used to determine the status quo. The requirements of the IFS Global Markets Food V3 standard are used as the target. A good information base is necessary to determine the actual status in relation to the requirements of the target status. For this purpose, a document analysis, observations and employee surveys are carried out (HÄUSLEIN 2004, p. 47 ff.). The aim of this is to increase the amount of conscious information on the part of the informants and the analyst, and to reduce the amount of unconscious, hidden information for the analyst and unconscious information on the part of the informant, which can lead to operational blindness. Unconscious information from both parties also exists and is referred to as a white spot. With the help of these methods, the aim is to obtain information that is as meaningful as possible (HÄUSLEIN 2004, p. 48).

The inventory technique is used to analyze documents. This is used to examine documents that are related to the IFS Global Markets Food V3 requirements catalog. Information obtained from these documents is extracted and derived (HÄUSLEIN 2004, p. 59). The sources of the document analysis consist of internal company documents (e.g. organization chart, flow chart, brewbook, HACCP concept, internal communication) as well as external documents (e.g. LMIV, Rundschau der privaten Brauereien, Newsletter deutscher Brauerbund) (HÄUSLEIN 2004, p. 47, p. 59 f.). Gaps in information and the search for relevant and meaningful documents can present a challenge when analyzing documents. This can be countered by supporting the identification of important information by company employees with the appropriate skills (HÄUSLEIN 2004, p. 60). Another challenge that should be considered is the possible difference between the actual circumstances in the company and the official facts found in the documentation. Accordingly, recognized deviations provide valuable information and should also be taken into account when preparing for certification (HÄUSLEIN 2004, p. 60).

With the help of observations during the one-month internship, it was also possible to perceive facts without disrupting the workflow in the brewery. However, the employees' awareness of the observation can influence their behavior and possibly falsify the results of the information gathering (HÄUSLEIN 2004, p. 58 f.). The employee survey is used to gather information on more complex factual behavior and is conducted using the unstructured, free interview technique in individual interviews as well as in group interviews (HÄUSLEIN 2004, p. 49 f.). The interview technique is considered to be extremely effective, prevents misunderstandings, conveys appreciation and involves the interviewees in the developments in preparation for certification according to IFS Global Markets Food V3 at Landshuter Brauhaus AG Privatbrauerei for the Ellermühle site (HÄUSLEIN 2004, p. 50).

7 Results of the conformity check

A total of 65 deviations (equivalent to 53.7%) were identified at the basic level, and 60 deviations (equivalent to 82.2%) at the intermediate level.

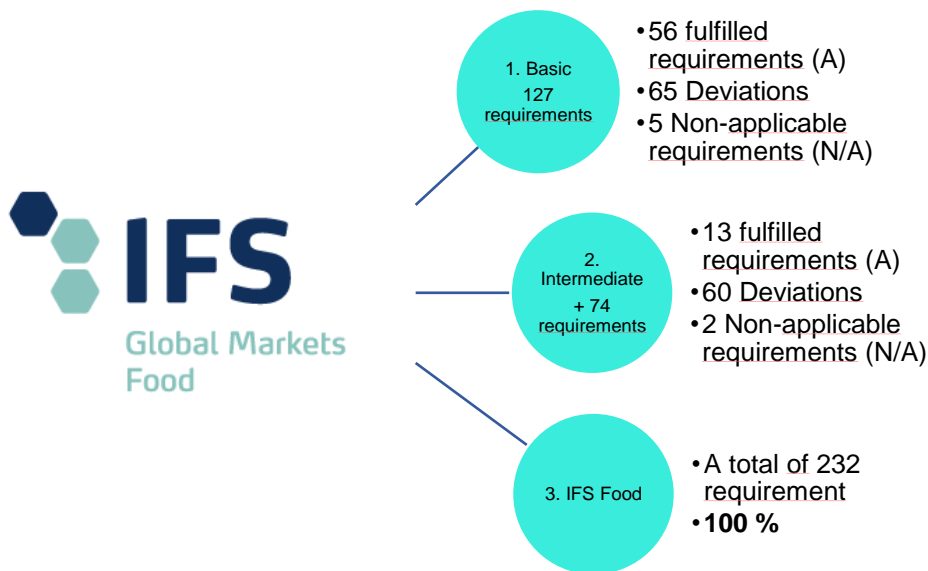


Fig. 1: Overview of requirements and deviations at Landshuter Brauhaus AG Privatbrauerei (IFS 2023, p. 1; IFS 2023, p. 15).

8 Processing of deviations from the program

Deviations are dealt with either as direct corrective measures or in the form of recommendations for continuous improvement within an action plan. It should be noted that the IFS does not define precise methods for achieving the requirements stipulated in the program. This serves to promote the self-development, flexibility and individuality of the companies (SCHUHMANN 2023).

8.1 Examples for corrective measures implemented

1.1.1 (B)

The corrective measures implemented are, for example, requirement 1.1.1 (B) in the chapter: Governance and commitment. The program requires effective and timely communication of all relevant information regarding

food safety, product quality and legality to the responsible personnel (IFS 2023, p. 51). Relevant information and changes are currently passed on verbally via internal communication without documentation. On the company's website, the Bavarian Purity Law and the strictest quality controls carried out by hand throughout the entire brewing process are mentioned in the quality promise (LANDSHUTER BRAUHAUS 2023). However, there is a lack of specifics regarding food safety, product quality and legal requirements. The passing on of relevant information and clear communication regarding changes to the staff concerned could, for example, be communicated internally in the form of a company policy via flyer, poster, email or on the intranet and published externally on the company's own website. For this purpose, a Word file with the template of a company policy - adapted to the information from requirement 1.1.1 (B) - was created for Landshuter Brauhaus, which was adapted by the company management.

2.3.5.1 (I)

In chapter Food safety and quality management the program requires verification of the flow diagrams through on-site inspections at all operational levels and shifts by representatives of the HACCP team as well as any adjustments to the flow diagram (IFS 2023, p. 65; SCHUHMANN 2023). The flow charts were last checked and adjusted on 10.05.2023 by on-site inspections by the HACCP team. Verification, for example in the form of the dual control principle, is missing from the documents and has been supplemented accordingly in the form of a corrective measure. Changes to the documents in the flow charts have been highlighted in color.

8.2 Examples for recommendations for continuous improvement within an action plan

Further corrective measures that were not implemented directly are presented below as recommendations for continuous improvement. These are formulated with regard to deviations that could not be implemented directly due to a lack of decision-making authority, time, financial or other reasons. Additional recommendations that go beyond the requirements of the IFS Global Markets Food v3 program are marked with the abbreviations "optional" or "possibly". The resulting work packages are presented in the form of an action plan, each with an assigned priority. The Excel file of the action plan is divided into the basic level (B) and intermediate level (I) in order to provide the company with an overview of the resulting urgency of the respective levels - from chapters 1 to 5 of the IFS Global Mark Food V3 - of the step-by-step program in tabular form. The deviations are assigned the respective measure or additional recommendation, the corresponding responsibility, the time period for implementing the measure and the current status.

In general, it can be said that work packages from the basic stage should be completed by the time of the first certification audit at the latest. Work packages from the intermediate stage should be completed after successful realization of the basic stage and by the time of the second certification audit - usually one year later (IFS 2023, p. 15).

Two recommendations for continuous improvement are presented below as examples:

1.1.4 (I)

At the intermediate level in chapter Governance and commitment, the IFS Global Markets Food V3 program requires company management to ensure that its employees are aware of their responsibilities with regard to aspects of food safety and product quality (IFS 2023, p. 54). A discrepancy was identified in this, which lies in the incompleteness of the job descriptions with the respective responsibilities for all employees. As a result, the job descriptions of all employees need to be completed. Optionally, a responsibility matrix consisting of tasks, responsibilities and competencies could be created. Based on the VDOE, an example of a template for a responsibility matrix was created, but this needs to be further adapted and supplemented (VDOE 2020, p. 105).

2.1.2.3 (B)

The IFS Global Markets Food V3 program requires secure storage and accessibility of records and documented information (IFS 2023, p. 61). As of February 2023, access to records and documented information is only granted digitally to authorized persons and documents in paper form only to internal personnel who have access to the offices during office hours. Access to the cellar room outside the brewery can only be made possible with the support of the Eller family. The secure storage of documents in paper form in the event of potential misuse, loss or falsification cannot yet be fully guaranteed, which is why the introduction of a digital document management system is necessary. As a result, the digital document management system "PVUP" already planned for October 2023 should be introduced (PRINTVISION AG 2023). As an alternative to "PVUP", the introduction of the integrated management system "Orgavision" could also be of interest, as it also includes the option of process management in addition to document management (ORGAVISION 2023).

9 Conclusion with outlook

A review as well as assessment of relevant requirements with regard to processes and significant violations after completion of the new building and commissioning at the Ellermühle site with regard to correlation with a potential "major" rating is recommended on the part of the operations manager or brewmaster (IFS 2023, p. 30).

Due to the difference in the number of non-conformities at the basic level and the intermediate level, it is recommended that the action plan be processed first at the basic level in August 2025 and, following its successful implementation, the associated entry into certification according to IFS Global Markets Food V3. After successful certification at the basic level, it is recommended that the action plan for the intermediate level be processed in order to be able to aim for subsequent certification at the aforementioned level one year later, in August 2026. Any changes to the process should be taken into account within the action plan and adapted accordingly. After confirmed fulfillment of the requirements at both previous levels, the certification of Landshuter Brauhaus AG Privat-brauerei according to IFS Food V8 could be prepared in August 2027 after processing further deviations from the IFS Food Version 8 (V8) requirements catalog.

Further research could also be required into the potential purchase of a heat recovery system and sufficient permanently installed CO₂ fans at the Ellermühle site for CO₂ recovery. In addition, the relevance of certification for energy and environmental management systems, such as ISO 50001, ISO 14001 or EMAS, could be

investigated for Landshuter Brauhaus AG Privatbrauerei (UMWELTBUNDESAMT 2023; UMWELTGUTACHTERAUSCHUSS 2023).

The cooperation with yeast banks and the yeast propagation and propagation carried out by the Landshut brewery itself for the production of brewer's yeast also require further research (GMEINER 2022; GMEINER 2023). With regard to occupational safety, the purchase of a personal emergency signal system with wireless and sensor-equipped signaling devices for each employee working alone in a department could also be discussed, regardless of the requirements of IFS Global Markets Food V3. The purchase could trigger an alarm in the reception center in an emergency (BERGMANN 2023). As a result, emergencies could be dealt with as quickly as possible and the health of employees could be optimally ensured.

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