

	FOOD FRAUD RISK ASSESSMENT	Document No: RD-01
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Types of Food Fraud

Food fraud can be grouped under various headings. The most common ones are given below with examples:

- **Dilution**, Adding a less valuable equivalent to a valuable food. Examples; Adding sunflower oil to olive oil, glucose to honey, tap water to spring water, peanuts to pistachios, etc.
- **Substitution**, Replacing a valuable ingredient in food with a less valuable one or changing the entire food. Examples; replacing butter in yogurt with vegetable oil, using a different meat instead of beef, etc.
- **Hiding** Using tricks to make a low-quality product look high-quality or more attractive. For example, using chemicals to make stale fish look fresh.
- **Use of illegal substances** Changing the properties of food by using substances that are prohibited to be added to food. For example, adding melamine to milk powder, adding dye to spices, etc.
- **Mislabeling** When the label does not accurately reflect the product content. Re-labelling expired products, indicating a different origin, etc.
- **Black Market Product, Stolen Product**
- **Copy** Imitating known brands, copying packaging

Food Fraud Risk Assessment Steps

The following steps were followed in the food fraud risk assessment:

- A list of all inputs and suppliers was created,
- For each entry, possible types of forgery and fraud were identified,
- The risk level of fraud has been determined,
- Precautions and controls have been determined,
- The application was made and the record was kept
- The plan is reviewed periodically (annual).

Risk Assessment Factors and Risk Analysis

Food fraud has been examined separately in terms of raw materials and suppliers, and the detectability factor has been added. All parameters have been added to the risk assessment table as a factor of the total risk score.

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A) Raw Material

1) Background information of the raw material and cases. Is there a known history of fraud in the raw material (eggshell)? Sources from which you can obtain historical information have been researched, business experience and field rumors have been taken into account.

2) Economic gain . The price of the raw material does not make fraud attractive. When the evaluation is made based on the price per kilogram of the raw material, although the prices of the raw materials vary from business to business, seasonal price changes are limited.

3) Structure, form / noticeability of the raw material . The structure of the raw material does not make it difficult to detect the type of fraud. Fraud detection is easier in solid and large-form raw materials. Consultancy support is received from Prof. Dr. Muhammed YÜCEER from Çanakkale Onsekiz Mart University on this subject.

Notes: Organic egg shell membrane is used as a specially certified raw material and is also declared.

B) Supplier

1) Supplier history, supplier structure. No case has been detected in the supplier history in the last 3-year period. The trade relationship with the supplier companies is over 5 years. The suppliers have global company status.

2) Geographic location of the supplier. Considering the social and economic situation of the country where the supplier is located, it is subject to legal regulations and is inspected.

3) Length of the supply chain. Raw materials are purchased directly from the producer and not from an intermediary. In this respect, the risk level is low.

C) Detectability

Food fraud can be detected by eye or simple techniques. In addition, for advanced techniques with analytical devices, consultancy support is received from Prof. Dr. Muhammed YÜCEER from Çanakkale Onsekiz Mart University.

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Calculating Risk Score

- For raw material parameters, between 1-5
- For supplier parameters, between 1-5
- For detectability, rate from 1 to 4.

The results are formed as follows.

Raw Material Average Value (past cases*1xeconomic gain*5xstructure of raw material*4): 20

Supplier Average Value (supplier history*2xgeographic location*3*supply length*1): 6

- High Risk, 80-100 points
- Risky, 60-80 points
- Medium Risk, 40-60 points
- Low Risk, 0-40 points

As a result, the Risk assessment score was found to be 26 and a low risk group was identified.