

DIGITAL COURSE WITH TRAINING MATERIALS
AND TOOLS FOR ADULT EDUCATORS

THE TRADITIONAL AND CONTEMPORARY FOOD PRESERVATION TECHNOLOGIES FROM NORDIC/BALTIC CUISINE

NO LEFTOVER NORDIC/BALTIC
CULINARY ARTS: DIGITAL COURSE
WITH TRAINING MATERIALS AND TOOLS
FOR ADULT EDUCATORS



THE TRADITIONAL AND CONTEMPORARY FOOD PRESERVATION TECHNOLOGIES

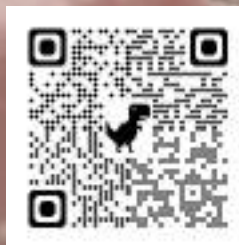
from Nordic/Baltic cuisine

Abstract

“The traditional and contemporary food preservation technologies from Nordic/Baltic cuisine” including Denmark, Estonia, Iceland, Latvia, Lithuania with the focus on “use local” and relation to sustainability.

Nordic/Baltic Value: Nordic/Baltic cuisine has very old interesting history, traditions, recipes, methods. Nowadays Culinary Arts involve old traditions, sustainability aspects such as keeping cultural heritage and using local products, integration of the modern technologies, innovations and digitalisation, avoiding and minimising waste.

We intend to strengthen the ideology of NO LEFTOVER not only at household and amateur level, but also at professional level within the adult educational programmes. The project partners will demonstrate the approaches to integrate the classy and modern traditional Nordic/Baltic culinary arts with mastery of NO LEFTOVER at all levels of culinary arts in a detailed, creative, informative and inspirational way.



Reference: Zvereva, O. et al (2024). The traditional and contemporary food preservation technologies from Nordic/Baltic cuisine. Nordplus Adult. NO LEFTOVER Nordic/Baltic Culinary Arts: digital course with training materials and tools for adult educators. Project ID: NPAD-2022/10049. ISBN Code: Website: www.no-leftover-nordic-baltic-culinary-arts.com



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Cranberry in sugar,
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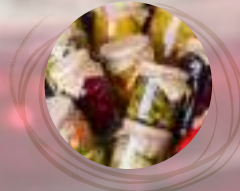


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TRADITIONAL PRESERVED DISHES AND PRODUCTS BY NORDIC AND BALTIC COUNTRIES



LATVIA



LITHUANIA



ESTONIA



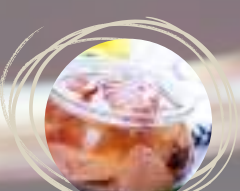
DENMARK



ICELAND



SWEDEN



NORWAY



FINLAND



GREENLAND

PRESERVATION TECHNOLOGIES IN NORDIC AND BALTIC COUNTRIES



SALTING



PICKLING



FERMENTATION



SMOKING



DRYING



CURING



CONFITING



CANNING AND PRESERVING



**ALCOHOL AND VINEGAR
AND OTHER TECHNIQUES**

Description of the Project

'The aim of the project "NO LEFTOVER Nordic/Baltic Culinary Arts: Digital Course with Training Materials and Tools for Adult Educators", No. NPAD-2022/10049, is to enhance teaching methods of adult educators in Culinary Arts focusing on Nordic/Baltic traditional and contemporary cuisine with approach of NO LEFTOVERS at different stages including planning ingredients and portions, cooking, serving, selling, marketing the dishes and cuisine concepts, finding reasonable consumption ways for leftovers, responsible handling of final stage waste.

Nordic/Baltic added value

The Culinary Arts, and specifically Nordic/Baltic cuisine, has very old interesting history, traditions, recipes, methods, and the contemporary Culinary Arts involve these old traditions, sustainability aspects such as keeping cultural heritage and using local products, integration of the modern and traditional preservation and no leftover techniques, innovations and digitalisation.

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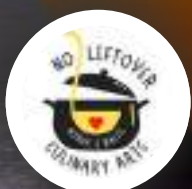


Photo:
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Project Partners

COUNTRY	PARTNER NAME	WEBSITE
LATVIA	"HOTEL SCHOOL" Viesnīcu biznesa koledža	www.hotelschool.lv
LITHUANIA	Vilniaus kolegija	www.viko.lt
ESTONIA	MITRA	www.mitra.ee
ICELAND	STEP BY STEP CONSULTING	www.sfsradgjof.is
DENMARK	Com&Train	www.comtrain.dk

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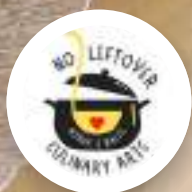
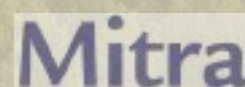
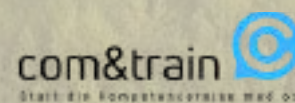


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Introduction

The project NPAD-2022/10049 outcomes of the development projects lead to the developed new course 'Digital Course in NO LEFTOVER Nordic/Baltic Culinary Arts for Adult Educators' including the development of the course content and module setup, choice of digital format, methods and materials to be used.

The purpose is to improve methods of adult teaching, adults' access to learning, improving the quality of adult learning and meeting new or changing needs for the changing environment of specifics of hospitality business offers, culinary arts variety and diversification approaches, trends in tourism for new experiences and tastes, modern society needs for technical and digital enhancement and reformatting, the focus on sustainability to sustain the traditions and cultural heritage as well as global and national resources by responsible consumption and using local ingredients and other resources. The course development supports the development of training opportunities for teachers, mentors and other pedagogical staff in adult education of the project coordinator, all project partners and other organizations and private companies, public organizations as the course will be optimized product for different categories of adult educators.

Nordic/Baltic added value

Project ID: NPAD-2022/10049

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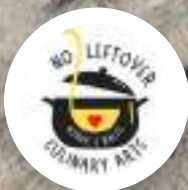


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The Aim and the Objectives of the Guidebook

'Nordic/Baltic cuisine has very old interesting history, traditions, recipes, methods. Nowadays Culinary Arts involve old traditions, sustainability aspects such as keeping cultural heritage and using local products, integration of the modern technologies, innovations and digitalisation, avoiding and minimising waste. We intend to strengthen the ideology of NO LEFTOVER not only at household and amateur level, but also at professional level within the adult educational programmes. The project partners will demonstrate the approaches to integrate the classy and modern traditional Nordic/Baltic culinary arts with mastery of NO LEFTOVER at all levels of culinary arts in a detailed, creative, informative and inspirational way. The five project results shaping the course will serve as attractive materials, tools to aid adult educators for raising extrinsic and intrinsic motivation of their adult learners in applying the principles of NO LEFTOVER in Culinary Arts.

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Nordic/Baltic added value
Project ID: NPAD-2022/10049

Description of the target audience for the guidebook and Learning Outcomes, expected results after reading the Guidebook

Primary target group of adult educators include adult educators working with Culinary Arts programmes at professional and amateur level.

·In addition, secondary target group are adult educators working with adults within the social programmes, leisure activities, business trainings and coaching, lifelong learning workshops, seminars, networking events, where the activities of culinary arts, events with serving food are embedded.

·Across formal, informal and/or non-formal adult learning;

·Both general and vocational learning;

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Nordic/Baltic added value

Project ID: NPAD-2022/10049



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WHAT DO YOU KNOW ABOUT THE NORDIC / BALTIC FOOD PRESERVATION TECHNOLOGIES?

- What traditional methods are commonly used in Nordic and Baltic countries for preserving fish, and how do these methods impact the flavor and texture of the fish?
- Describe the process of fermentation as it is practiced in the Nordic and Baltic regions. What are some typical fermented foods from these areas?
- How is smoking used as a preservation technique in Nordic and Baltic cuisine, and what types of wood are preferred for this process?
- Explain the role of salting and drying in the preservation of meat and fish in Nordic and Baltic countries. What are some examples of foods preserved using these methods?
- What are some historical reasons for the development of specific food preservation techniques in the Nordic and Baltic regions? How have these techniques influenced modern cuisine in these areas?



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NORDIC-BALTIC

Review and Summary on Traditional Nordic-Baltic Culinary Arts

The Nordic-Baltic region encompasses Denmark, Estonia, Finland, Iceland, Latvia, Lithuania, Norway, and Sweden, as well as the autonomous regions of Greenland, Åland and the Faroe Islands. Historically, these countries have been interlinked and have interacted with one another for centuries. Mutual trade has been the decisive factor facilitating this interaction. In recent decades, the Nordic and Baltic countries have grown closer, collaborating on issues like circular economic models, regional security and digital transformation. (Nordic Council of Ministers, 2020.)

**Nordic/Baltic added value
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USE LOCAL

Definitions: Theory Review "Use Local"

Local sourcing is more than just a buzzword; it's a strategy revolutionizing sustainable business practices. From small-scale farmers to artisanal producers, there are countless benefits to embracing local sourcing as part of your company's sustainability efforts. (Deb Dulal Das, 2023).

Benefits of Local Sourcing for Sustainable Businesses:

Significant benefits await sustainable businesses that hire sourcing companies to prioritize local sourcing. By directly supporting local farmers and producers with jobs and income, local sourcing helps boost the regional economy. Additionally, it curtails the transportation charges and carbon footprint of conveying merchandise across vast areas. (Deb Dulal Das, 2023).

Think local in order to help achieve the Sustainable Development Goals. Using local produce makes sense both for your wallet and for the environment, and it contributes towards many of the SDGs. (The SDG Fund. (n.d.)

Nordic/Baltic added value
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USE LOCAL



Nordplus



Definitions: Theory Review
"Use Local"

Some tips to help you cook local:

- 1. Go to farmers' markets:** this way, you can help support local producers, the local economy and encourage local employment. Plus, you can try products you might not find in supermarkets!
- 2. Check product origin:** nowadays, food is often transported halfway across the world so it can be available on supermarket shelves year-round. But local, seasonal products tend to be cheaper, fresher, with less additives or preservatives and choosing them is another way of helping support the local economy.
- 3. Plan seasonal menus:** find out what is in season and plan menus around this. This will ensure variety in your diet throughout the year and mean that you use fresh, tasteful produce. If you're feeling particularly adventurous, eating invasive, non-native species of plants and animals can be the source of unique recipes while helping to balance local ecosystems.
- 4. Turn your backyard, windowsill or rooftop into a kitchen garden:** no matter how little space you have, there are plenty of things you can grow yourself cheaply and easily. Herbs such as parsley, mint or basil require very little space to grow and can really help transform your dishes.
- 5. Use less processed food:** buy better quality, fresh food and then use it more efficiently, reducing food waste by saving leftovers and planning meals ahead of time. This saves money while supporting a more efficient use of resources. (The SDG Fund. (n.d.))



NORDIC & BALTIC PRESERVATION TECHNOLOGIES

FOOD PRESERVATION

General preservation method using salt
(used in all Nordic and Baltic countries).

FOOD PRESERVATION

Food preservation, any of a number of methods by which food is kept from spoilage after harvest or slaughter. Such practices date to prehistoric times. Among the oldest methods of preservation are drying, refrigeration, and fermentation. Modern methods include canning, pasteurization, freezing, irradiation, and the addition of chemicals. Advances in packaging materials have played an important role in modern food preservation. (Singth, P., Daesrosier, N. W., 2024).

FOOD PRESERVATION

- Spoilage mechanisms
- Microbial contamination
- Bacteria
- Fungi: important in food spoilage are yeasts and molds.
- Control of microbial contamination
- Chemical deterioration
- Enzymatic reactions: Enzymes are large protein molecules
- Autoxidation (Singth, P., Daesrosier, N. W., 2024).

SPOILAGE MECHANISMS

- **Spoilage mechanisms**
- Maillard reaction
- Light-induced reactions



NORDIC & BALTIC PRESERVATION TECHNOLOGIES

FOOD PRESERVATION

General preservation method using salt
(used in all Nordic and Baltic countries).

- Low-temperature preservation
- Refrigeration
- Freezing (Singth, P., Daesrosier, N. W., 2024).

- Thermal processing
- Canning
- Presterilization procedures
- Sterilization
- Pasteurization
- Aseptic processing
- Blanching
- Dehydration
- Fermentation and pickling
- Pickled fruits and vegetables
- Pickled meat (Singth, P., Daesrosier, N. W., 2024).

FOOD IRRADIATION

- Organic chemical preservatives
- Inorganic chemical preservatives:
- Sulfur dioxide and sulfites are perhaps the most important inorganic chemical preservatives.
- Food irradiation
- Food irradiation involves the use of either high-speed electron beams or high-energy radiation with wavelengths smaller than 200 nanometres, or 2000 angstroms (e.g., X-rays and gamma rays). These rays contain sufficient energy to break chemical bonds and ionize molecules that lie in their path.

(Singth, P., Daesrosier, N. W., 2024).



NORDIC & BALTIC PRESERVATION TECHNOLOGIES

MICROBES

General preservation method using salt (used in all Nordic and Baltic countries).

If you leave fresh food lying around, one of the first things that happens is that microbes land on it. And this starts to deteriorate food over time. And of the worst things they can do is start to produce toxins that can be poisonous to anyone eating that food. And the ancients discovered a very, very long time ago, that one way to stop this is to try and preserve food. (Singh, P., Daesrosier, N. W., 2024).

Microbes are responsible for creating some of our most enjoyable food products-- such as cheese, bread, yogurt, and of course, beer.

But other microbes-- such as salmonella, listeria, or E coli 0157-- can do us a great deal of harm. (Singh, P., Daesrosier, N. W., 2024).

They used a variety of methods such as salting, drying, icing, pickling, smoking, or fermentation for beer, cheese, and bread-- all of which we still use today.

Boiling doesn't kill all the microbes, just most of them. Some bacteria are actually resistant to the temperature of boiling water, which is a 100 degrees Celsius. To get rid of them, you need to raise the temperature to about 121 degrees. But you can only do this by heating water under pressure.

Many microbes can't survive alcohol, whereas yeast can, which makes it an effective form of preservation.

Acid conditions-- such as vinegar or pickling-- are also inhospitable environments for microbes. (Singh, P., Daesrosier, N. W., 2024).

PRESERVATION TECHNOLOGIES IN NORDIC AND BALTIC COUNTRIES



1. SALTING

2. DRY SALTING

3. BRINING



4. PICKLING

5. FERMENTATION

6. LACTIC ACID FERMENTATION



7. COLD SMOKING

8. HOT SMOKING

9. CURING



10. AIR DRYING

11. FREEZE DRYING

12. SUN DRYING

13. OVEN DRYING



14. DEHYDRATION

15. SOURING

16. MARINATING

17. SUGAR CURING



18. VACUUM SEALING

19. CANNING

20. PRESSURE CANNING



21. JAM MAKING

22. JELLY MAKING

23. MARMALADE MAKING

24. PRESERVING IN ALCOHOL



25. CONFITING

26. POTTING

27. BOTTLING



28. BAKING

29. FRUIT LEATHER

30. HERB DRYING

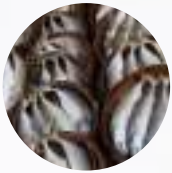
PRESERVATION TECHNOLOGIES IN NORDIC AND BALTIC COUNTRIES



31. SMOKING WITH JUNIPER
32. SMOKING WITH BIRCH
33. CHEESE AGING
34. BUTTER CHURNING
35. MAKING GHEE
36. MAKING TALLOW
37. MAKING LARD
38. CLARIFYING BUTTER
39. ROOT CELLAR STORAGE
40. SAND STORAGE
41. SAWDUST STORAGE
42. POTATO STARCH PRODUCTION
43. PECTIN EXTRACTION
44. VINEGAR MAKING
45. MALT VINEGAR PRODUCTION
46. APPLE CIDER VINEGAR PRODUCTION
47. BEER BREWING
48. KVASS PRODUCTION
49. MEAD BREWING
50. BERRY WINE MAKING
51. SCHNAPPS DISTILLATION
52. AQUAVIT DISTILLATION
53. HOME DISTILLING
54. MUSTARD MAKING
55. HORSERADISH PRESERVATION
56. SALTED LICORICE PRODUCTION
57. SOUSED HERRING PREPARATION
58. BREAD FERMENTATION
59. RYE BREAD BAKING
60. FLATBREAD DRYING



PRESERVATION TECHNOLOGIES IN NORDIC AND BALTIC COUNTRIES



61. RUSK MAKING



62. HARDTACK BAKING

63. LINGONBERRY PRESERVING

64. PRESERVED LEMONS

65. FISH DRYING



66. KLIPPFISK PRODUCTION

67. STOCKFISH PRODUCTION

68. LUTEFISK PREPARATION

69. RAKFISK PREPARATION

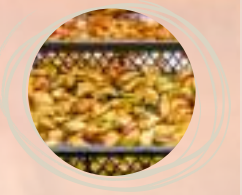
70. SURSTRÖMMING FERMENTATION



71. GRAVLAX CURING

72. RØGET LAKS SMOKING

73. BLOOD SAUSAGE MAKING



74. LIVER SAUSAGE MAKING

75. SALAMI CURING

76. PASTRAMI CURING

77. SPEKEMAT CURING



78. CAVIAR SALTING

79. ROE SALTING

80. SALTED BUTTER PRODUCTION



81. SOURED MILK PRODUCTION

82. KEFIR PRODUCTION

83. YOGURT PRODUCTION

84. BUTTERMILK PRODUCTION



85. SMETANA PRODUCTION

86. KUMIS PRODUCTION

87. TVAROG MAKING

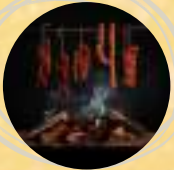
88. CLOTTED CREAM PRODUCTION



89. HOME PASTEURIZATION

90. ROOT VEGETABLE FERMENTATION

PRESERVATION TECHNOLOGIES IN NORDIC AND BALTIC COUNTRIES



91. BERRY DRYING
92. MUSHROOM DRYING
93. LEAFY GREENS DRYING
94. HERB INFUSIONS
95. SOUR SOUP FERMENTATION
96. MOLASSES CURING
97. HONEY PRESERVATION
98. PICKLED EGGS PREPARATION
99. SALTED FISH ROE PRODUCTION
100. FERMENTED ROOT VEGETABLES
AND OTHER TECHNIQUES AND METHODS

- **DO YOU KNOW ALL LISTED PRESERVATION TECHNIQUES?**
- **CAN YOU DEFINE THE COUNTRIES WHERE THESE PRESERVATION TECHNIQUES WERE AND ARE USED?!**

Similarities in preservation technologies of the Nordic and Baltic regions

- 1. Climate Influence:** Both regions experience long, harsh winters and short growing seasons, necessitating effective food preservation methods to ensure food supply throughout the year.
- 2. Abundant Natural Resources:** Both regions have access to plentiful fish and seafood, wild berries, mushrooms, and game, which are often preserved using traditional methods.
- 3. Traditional Techniques:** Many preservation techniques like salting, smoking, fermentation, and drying are common in both regions due to their effectiveness and simplicity.

Nordic/Baltic added value
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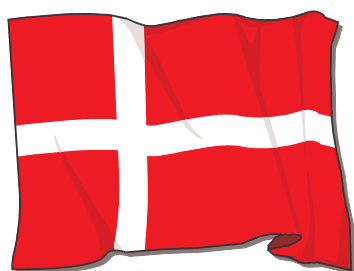
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DENMARK



KEY FACTS :

Population: 5,965,990 (2024, Denmark statistics)

Capital: Copenhagen

Territory: Denmark is a country in northern Europe between the North Sea and Baltic Sea. The land has a total area of 42,920 km² (worlddata.com)

Nature: The Danish landscape is predominately flat. There's a variety of forests, hills, and marshes. The Danish coast line is the 16th longest in the world, stretching a total of 7,314 kilometers.

DENMARK

Review and Summary on Traditional Preservation Technologies

- 1. Pickling:** Widely used for vegetables and fish, such as pickled herring.
- 2. Smoking:** Common for fish and sausages; Danish smoked cheese is also notable.
- 3. Curing:** Both dry and brine curing are used for meats, particularly pork products like bacon.
- 4. Fermentation:** Less emphasized but used for some dairy products like sour milk.

Nordic/Baltic added value
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ESTONIA



KEY FACTS :

Territory 45,339 km²

Forest area: over 47%

Shoreline: 3,794 km in length

Lakes: over 1,500

Rivers: over 7,000

Population: 1,319,041 mln (2024)

Capital City: Tallinn



ESTONIA

Review and Summary on Traditional Preservation Technologies

- 1. Fermentation:** Traditional methods include fermenting cabbage, cucumbers, and other vegetables.
- 2. Smoking:** Utilized for fish, especially Baltic herring, and meats.
- 3. Salting and Brining:** Common for fish and vegetables.
- 4. Drying:** Applied to mushrooms and some fish.

**Nordic/Baltic added value
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ESTONIA

ESTONIAN PRESERVATION TECHNIQUES





LATVIA



KEY FACTS:

Territory: 64,589 km²

Shoreline: 494 km in length

Forest area: over 52% (2021)

Lakes: over 2,300

Rivers: over 12,000

Population: 1,883 mln (2023, Csp)

Capital City: Riga

LATVIA



Review and Summary on Traditional Preservation Technologies

- 1. Fermentation:** Commonly used for vegetables such as sauerkraut and pickles.
- 2. Smoking:** Frequently used for fish, especially herring and eel, as well as for sausages and other meats.
- 3. Drying:** Used less commonly, but some dried fish and mushrooms are found.
- 4. Canning and Preserving:** Fruit preserves, particularly from berries like cranberries and black currants.

Nordic/Baltic added value
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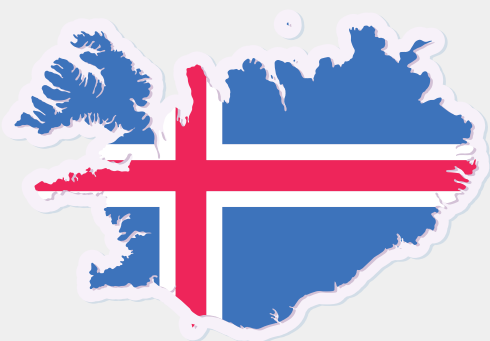
LATVIA

LATVIAN PRESERVATION TECHNIQUES





ICELAND



KEY FACTS :

Territory 103.000 km²

Forest area: about 2 %

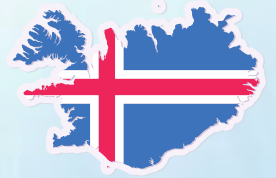
Shoreline: 6.542,4 km in length

Lakes: 40 varying between 2.5 - 10 km²

Rivers: over 55 rivers, longest one is Þjórsá.

Population: 383.726 mln (2024)

Capital City: Reykjavik



ICELAND

Review and Summary on Traditional Preservation Technologies

1. **Fermentation:** Traditional methods include fermenting shark (hákarl) and skyr (a cultured dairy product).
2. **Drying:** Very common for fish, such as in the production of harðfiskur (dried fish).
3. **Smoking:** Used for both fish and lamb, adding unique flavors with local woods.
4. **Salting:** Essential for fish preservation, including methods like making saltfish (salted cod).

**Nordic/Baltic added value
Project ID: NPAD-2022/10049**



LITHUANIA



KEY FACTS :

Territory 65,300 km²

Forest area: over 34.5% (World Bank, 2021)

Shoreline: 262 km in length

Lakes: over 2800

Rivers: over 4,418 (longer than 3 km)

Population: 2.832 mln (2023, Statistical Department of Lithuania)

Capital City: Vilnius

LITHUANIA



Review and Summary on Traditional Preservation Technologies

- 1. Fermentation:** A major method, with fermented vegetables like sauerkraut, cucumbers, and beet kvass being popular.
- 2. Smoking:** Extensively used for meats, especially in making traditional sausages like skilandis.
- 3. Salting and Brining:** Common for preserving pork and other meats.
- 4. Canning and Preserving:** Fruit preserves, particularly from berries and apples, as well as honey preservation.



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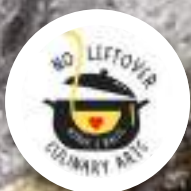
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FAROE ISLANDS



Review and Summary on Traditional Preservation Technologies

- 1. Drying:** A primary method due to the windy climate, used for fish (particularly cod) and mutton (ræst kjøt).
- 2. Fermentation:** Fish and meat are often fermented, including the traditional ræst fiskur (fermented fish).
- 3. Smoking:** Used for fish and meats, contributing to unique local flavors.
- 4. Salting:** Used extensively for fish preservation.



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GREENLAND

Review and Summary on Traditional Preservation Technologies

- 1. Drying:** Important for fish and marine mammals.
- 2. Fermentation:** Utilized in traditional foods like kiviak (fermented seabirds).
- 3. Smoking:** Used to preserve fish and marine mammals, adding flavor and extending shelf life.
- 4. Freezing:** Natural freezing is used due to the cold climate, particularly for meat and fish.

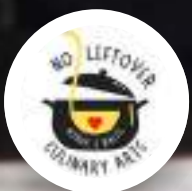




SWEDEN

Review and Summary on Traditional Preservation Technologies

- 1. Fermentation:** Widely used for dairy products (filmjök, cheese) and fish (surströmming).
- 2. Smoking:** Used for fish, like salmon and herring, and meats.
- 3. Pickling:** Popular for vegetables and fish, especially pickled herring.
- 4. Drying and Curing:** Dried fish (like stockfish) and cured meats (like gravlax) are common.



NORWAY

Review and Summary on Traditional Preservation Technologies

- 1. Drying:** A major method for fish, particularly in the production of stockfish and klippfisk.
- 2. Smoking:** Extensively used for fish (like salmon and trout) and meats.
- 3. Fermentation:** Used for dairy products (kefir) and fish.
- 4. Curing:** Both dry and brine curing are common, especially for fish and meats like gravlax.



NORDIC & BALTIC PRESERVATION TECHNOLOGIES

TRADITIONAL DISHES AND PRODUCTS

BY COUNTRY



SWEDEN

Surströmming
(Fermented
herring)



Gravlax (Cured
salmon with dill and
sugar)



Blodpudding
(Blood pudding)



SWEDEN

Skinka
(Cured ham)



Leverpostej (Liver pâté)



Lingonberry
preserves



DENMARK

Sylta (Head cheese
or brawn)



Rullepølse (Rolled,
spiced, and cured
pork belly)



Leverpostej (Liver pâté)



ICELAND

Stockfish (Unsalted
fish dried by cold air
and wind)



Klippfisk (Salted and
dried fish)



Klippfisk (Salted and
dried fish)

LATVIA,
LITHUANIA,
ESTONIA

Lard



Kvass (Fermented
beverage made
from rye bread)



Mead (Fermented
honey drink)



FINLAND

Kippers (Smoked
herring)



Finnan haddie
(Smoked haddock)



NORWAY

Rakfisk (Fermented
fish)



Saucisson (French-
style cured sausage
adapted in Nordic
regions)



Lutefisk





NORDIC & BALTIC PRESERVATION TECHNOLOGIES

SALTING

General preservation method using salt
(used in all Nordic and Baltic countries).



Photo: by andriafanasiev, Canva

DRY SALTING

**Rubbing salt directly
on the food**

used in all Nordic and Baltic
countries

BRINING

**Soaking food in a
saltwater solution**

used in all Nordic and Baltic
countries



Photo: by vallefrias from Getty Images, Canva



Photo: by tefonimages from Getty Images, Canva

CURING

**Using a combination
of salting, drying, and
sometimes smoking**

used in all Nordic and Baltic
countries



NORDIC & BALTIC PRESERVATION TECHNOLOGIES

SALTING

General preservation method using salt
(used in all Nordic and Baltic countries).

PICKLING

Pickling is a tradition that dates back over 4000 years to ancient Mesopotamia in the Middle East, where cucumbers were first cured. Although we tend to think of pickles when the term pickling is mentioned, it applies to any foods preserved either through lacto-fermentation or through a vinegar solution. (The Culinary Pro, N/D.)

BRINING

A cure dissolved in water is called a brine and works on the principle of diffusion. Because the salt solution is denser than the water in the food, equilibrium is sought, thereby drawing salt and moisture into the product, adding flavor and moisture to it. Brining can be done with any meat, fish, or poultry. In most brine recipes, a 3-5% salt ratio is standard but could be as high as 9-10%. (The Culinary Pro, n/d)

MARINATING

Marinades can be prepared with vinegar, wine, or citric acids and may include seasonings, salt, sugar, or oil. Whereas pickling is commonly used when no heat is applied, marinades are widely used for foods to be cooked. In addition to adding flavor to foods, marinades often are used to tenderize tough cuts of meat. The acidity will break down the meat fibers and make them tender, but care must be taken as marinating items like meats for too long can cause the texture to have a mushy feel in the mouth. (The Culinary Pro, n/d.)



NORDIC & BALTIC PRESERVATION TECHNOLOGIES

SALTING

General preservation method using salt
(used in all Nordic and Baltic countries).



Photo: by FSTOPLIGHT from Getty Images Signature, Canva

SALTED BUTTER

Butter preserved with salt

used in Denmark, Sweden, Norway, Finland; less common in Baltic countries

CHEESE AGING

Preserving cheese by aging

used in Denmark, Sweden, Norway; less common in Baltic countries



Photo: by kcline from Getty Images Signature, Canva



Photo: by magnola, Canva

QUARK

Using a combination of salting, drying, and sometimes smoking

used in all Nordic and Baltic countries



NORDIC & BALTIC PRESERVATION TECHNOLOGIES

SALTING

General preservation method using salt
(used in all Nordic and Baltic countries).



CURDS

Farmer's cheese

used in Latvia, Lithuania, Estonia.

Photo: by ogichobanov from Getty Images, Canva

Salt is a common food preservative favored because it naturally inhibits most bacteria and fungal growth. Ham, bacon, duck, fish, eggs, cheese, and vegetables can be salted through dry cures or wet brines for short or extended periods to achieve desired results.

Salted foods are sometimes dehydrated, as in the case of **lutefisk**, and then rehydrated later, before cooking. Salting can be done by rubbing the surface or burying the item in a salt bed. A salt paste or dough can also be used to encase the product. (The Culinary Pro, 2024.)



NORDIC & BALTIC PRESERVATION TECHNOLOGIES

PICKLING

Preserving in vinegar or brine
(used in all Nordic and Baltic countries).



Photo by bit245 from Getty Images, Canva

PICKLED CUCUMBERS

Cucumbers preserved in brine
used in Latvia, Lithuania, Estonia, Denmark, Iceland; not common in Faroe Islands.

PICKLED BEETS

Beets preserved in vinegar
used in Latvia, Lithuania, Estonia, Sweden, Finland



Photo by alisafarov from Getty Images, Canva



Photo by Ozbalci from Getty Images

OTHER PICKLED VEGETABLES

Different vegetables preserved in vinegar
(garlic, tomatoes, paprika, chili peppers, corn, etc.),
used mainly in the Baltic countries



NORDIC & BALTIC PRESERVATION TECHNOLOGIES

PICKLING

Preserving in vinegar or brine
(used in all Nordic and Baltic countries).



MARINATED MUSHROOMS

Mushrooms preserved in vinegar

used in Latvia, Lithuania, Estonia, Finland; less common in other Nordic countries

Photo by Sergii Baibak from Getty Images,, Canva

PICKLED SORREL

Sorrel preserved in vinegar
(for sorrel soup in winter season)

used in the Baltic countries mainly



Photo by y Martina Unbehauen from Getty Images,, Canva



PICKLED EGGS

Eggs preserved in
vinegar

used in Denmark, Sweden;
less common in other Nordic
and Baltic countries

Photo by Oleksandr Prokopenko,, Canva



NORDIC & BALTIC PRESERVATION TECHNOLOGIES

PICKLING

Preserving in vinegar or brine
(used in all Nordic and Baltic countries).



Photo by Santje09 from Getty Images, Canva

SOUSED HERRING

**Herring marinated
in vinegar and spices**

used in Sweden, Denmark, Norway;
less common in Baltic countries;

PRESERVED LEMONS

**Lemons preserved in salt and
their own juice**

not commonly used in Nordic and Baltic
countries



Photo by AscentXmedia from Getty Images
Signature, Canva



Photo by ArtSvitlyna from Getty Images, Canva

PICKLED PUMPKIN

**Pumpkin preserved in
vinegar with sugar,
also without vinegar**

used in the Baltic countries

Differences in preservation technologies of the Nordic and Baltic regions

FERMENTATION TECHNOLOGIES

Nordic: In the Nordic countries, fermentation is widely used, especially in the form of dairy products like skyr (Icelandic yogurt), surmjölk (soured milk), and cheese. The fermentation of fish, such as in surströmming (fermented herring), is also notable.

Baltic: Fermentation in the Baltic countries often includes a variety of vegetables, with sauerkraut (fermented cabbage) being very popular. Additionally, beverages like kvass (fermented rye bread drink) are more commonly found in the Baltic region.

Nordic/Baltic added value
Project ID: NPAD-2022/10049

100% NO LEFTOVER

Photo by estefaniavizcaino, Canva.



Differences in preservation technologies of the Nordic and Baltic regions

DAIRY PRESERVATION

Nordic: Dairy preservation in Nordic countries includes a range of fermented products, with cheeses like Västerbotten and traditional butter and cream products playing significant roles. Cultured dairy products such as filmjök and kefir are staples.

Baltic: The Baltic countries also have a strong dairy tradition, but with different products like curd cheese, smetana (sour cream), and fermented milk drinks. The emphasis on fresh and sour dairy products is more pronounced.

Nordic/Baltic added value
Project ID: NPAD-2022/10049

100% NO LEFTOVER

Photo by [Fascinadora](#) from [Getty Images](#), Canva.





NORDIC & BALTIC PRESERVATION TECHNOLOGIES

FERMENTATION

Allowing beneficial bacteria to convert sugars into acids
(used in all Nordic and Baltic countries).



Photo: by holbinski from Getty Images, Canva

**LACTIC ACID
FERMENTATION**
Specific type of fermentation
using lactic acid bacteria
(cold fermentation)
used in all Nordic and Baltic countries.

SAUERKRAUT

Fermented cabbage
used in all Nordic and Baltic countries



Photo: by czekma13 from Getty Images, Canva



Photo: by ArtSvitlyna from Getty Images, Canva

PICKLED PUMPKIN

**Pumpkin preserved in
vinegar with sugar,
also without vinegar**
used in the Baltic countries



NORDIC & BALTIC PRESERVATION TECHNOLOGIES

FERMENTATION

Allowing **beneficial bacteria to convert sugars into acids**
(used in all Nordic and Baltic countries).



KIMCHI

Fermented vegetables

(influenced by Korean cuisine, less traditional but used in all Nordic and Baltic countries)

Photo: by Alexander Labut from Getty Images, Canva

FERMENTED APPLES

Fermented apples in barrel
used mainly in the Baltic countries
(influenced, but not traditional)



Photo: by czekma13 from Getty Images, Canva



FERMENTED GREEN TOMATOES

Green (also red) tomatoes preserved in barrel vinegar

used in the Baltic countries;
influenced, but not traditional;



Photo: by ValentynVolkov from Getty Images, Canva



NORDIC & BALTIC PRESERVATION TECHNOLOGIES

FERMENTATION

Allowing beneficial bacteria to convert sugars into acids
(used in all Nordic and Baltic countries).



Photo: by Mizina, Canva

SOURED MILK SOURED CREAM

Fermented milk

used in all Nordic and Baltic countries.

KEFIR

Fermented milk drink

used in all Nordic and Baltic countries



Photo: by Fascinadora from Getty Images, Canva

YOGURT

Fermented dairy product

used in all Nordic and Baltic
countries



Photo: by Canva



NORDIC & BALTIC PRESERVATION TECHNOLOGIES

FERMENTATION

Allowing beneficial bacteria to convert sugars into acids
(used in all Nordic and Baltic countries).



Photo: by vm2022, Canva

BUTTERMILK

Cultured milk product

used in Denmark, Sweden, Norway, Finland.

SOUR CREAM

Type of sour cream

used in Latvia, Lithuania, Estonia, Finland



Photo: by Magone from Getty Images, Canva



Photo: by Svetlana Lazhko, Canva

KUMIS

Fermented mare's milk

less common, but known in some
Nordic countries



NORDIC & BALTIC PRESERVATION TECHNOLOGIES

FERMENTATION

Allowing **beneficial bacteria to convert sugars into acids** (used in all Nordic and Baltic countries).



Photo: by atlasstudio, Canva

KVASS

Fermented beverage made from rye bread

used in Latvia, Lithuania, Estonia

MEAD

Fermented honey drink

used in Latvia, Lithuania, Estonia; less common in Nordic countries



Photo: by bhofack2 from Getty Images, Canva

BERRY WINE

Wine made from fermented berries

used in all Nordic and Baltic countries



Photo: by igorr1 from Getty Images, Canva



NORDIC & BALTIC PRESERVATION TECHNOLOGIES

FERMENTATION

Allowing **beneficial bacteria to convert sugars into acids** (used in all Nordic and Baltic countries).



Photo: by pixelshot, Canva

BREAD

FERMENTATION

Preserving grains through **sourdough fermentation**

used in all Nordic and Baltic countries

BREAD FERMENTING

Sourdough bread dough loaves fermenting



Photo: by SensorSpot from Getty Images Signature, Canva



Photo: by gitusik from Getty Images, Canva

RYE BREAD WITH SEEDS

used in all Nordic and Baltic countries

Differences in preservation technologies of the Nordic and Baltic regions

SMOKING TECHNIQUES

Nordic: The Nordic countries have a strong tradition of dry curing, particularly with fish. Examples include stockfish (dried cod) and klippfisk (salted and dried fish). Meat products like Swedish rullepølse (spiced rolled meat) are also notable.

Baltic: The Baltic countries often use brining and pickling for meats and vegetables. The curing of meats like Lithuanian skilandis (smoked and dried sausage) and various pickled vegetables are prevalent.



Nordic/Baltic added value
Project ID: NPAD-2022/10049

100% NO LEFTOVER

Photo by Mykola Lunov, Canva.



NORDIC & BALTIC PRESERVATION TECHNOLOGIES

SMOKING

Cold smoking: Smoking food at a low temperature no higher than 100 degrees, and more often between 65 and 85 degrees;

Hot smoking: Smoking food at a higher temperature between 80 and 150°C
(used in all Nordic and Baltic countries).



RØGET LAKS

Smoked salmon

used in Denmark, Norway

Photo: by [FerhatMatt](#) from [Getty Images Signature](#),
Canva



KIPPERS

Smoked herring

used in Sweden, Denmark, Finland

Photo: by [metinkiyak](#) from [Getty Images Signature](#),
Canva



FINNAN HADDIE

Smoked haddock

used in Finland, Sweden

Photo: by [Carol_Ann_Peacock](#) from [Getty Images](#),
Canva



NORDIC & BALTIC PRESERVATION TECHNOLOGIES

SMOKING

Cold smoking: Smoking food at a low temperature no higher than 100 degrees, and more often between 65 and 85 degrees;

Hot smoking: Smoking food at a higher temperature between 80 and 150°C
(used in all Nordic and Baltic countries).



PASTRAMI

Cured and smoked meat

used in Denmark; less common in other Nordic and Baltic countries

Photo: by FSafakOguz from Getty Images, Canva

SMOKED MEAT
smoked according to age-old Latvian traditions, using only alder firewood and clean alder chips in the smoking process

used in the Baltic countries



Photo: by metinkiyak from Getty Images Signature, Canva



SMOKED MACKEREL

Cold smoking

Hot smoking

used in the Baltic countries

Photo: by Carol_Ann_Peacock from Getty Images, Canva



NORDIC & BALTIC PRESERVATION TECHNOLOGIES

DRYING

Air drying, freeze drying, sun drying, oven drying, dehydration



Photo: by Leo Malsam from Getty Images, Canva

AIR DRYING

**Drying food naturally
in the open air**

used in all Nordic and Baltic
countries

FREEZE DRYING

**Removing moisture from food
by freezing and then
sublimating the ice**

used in all Nordic countries; less
common in Baltic countries



Photo: by DAPA Images, Canva



Photo: by apidachjsw from Getty Images, Canva

SUN DRYING

Using sunlight to dry food
used in all Nordic and Baltic countries



NORDIC & BALTIC PRESERVATION TECHNOLOGIES

DRYING

Air drying, freeze drying, sun drying, oven drying, dehydration



Photo :by Rytis Bernotas from Getty Images, Canva

OVEN DRYING

Using an oven to dry food

used in all Nordic and Baltic countries

Boletus mushrooms

drying in the oven

used in the Baltic countries

DEHYDRATION

Removing moisture using a
dehydrator

used in all Nordic and Baltic countries



Photo: by DAPA Images, Canva



Photo: byTT from Getty Images, Canva

STOCKFISH

Unsalted fish dried by cold air
and wind

(cod stockfish)

used in Norway, Iceland



NORDIC & BALTIC PRESERVATION TECHNOLOGIES

DRYING

Air drying, freeze drying, sun drying, oven drying, dehydration



KLIPPFISK

Salted and dried fish

used in Norway, Iceland

dried salted cod fish

Photo :by [anouchka](#) from [Getty Images Signature](#)
Canva

BILTONG

Dry cured meat

less common, not traditional in Nordic
and Baltic countries



Photo: by [Drbouz](#) from [Getty Images Signature](#),
Canva



PEMMICAN

Mixture of dried meat and fat
(a mixture of tallow, dried meat, and
sometimes dried berries. A calorie-rich
food, it can be used as a key component
in prepared meals or eaten raw)

less common, not traditional in Nordic
and Baltic countries

Photo: by [The prepared.com](#)



NORDIC & BALTIC PRESERVATION TECHNOLOGIES

DRYING

Air drying, freeze drying, sun drying, oven drying, dehydration



JERKIES

**Strips of dried meat
(various meat jerky)**

used in all Nordic and Baltic countries

Photo :by luxiangjian4711 from Getty Images
Signature, Canva

BERRY DRYING

**Drying berries
for preservation
(dry cranberry)**

(used in all Nordic and Baltic countries)



Photo: by Stefan_Alfonso from Getty Images,
Canva



HERB DRYING

**Drying herbs for long-term
storage**

used in all Nordic and Baltic countries

Photo: by alle12 from Getty Images Signature,
Canva



NORDIC & BALTIC PRESERVATION TECHNOLOGIES

DRYING

Air drying, freeze drying, sun drying, oven drying, dehydration



Photo :by bhofack2 from Getty Images Canva

FRUIT LEATHER

**Dried fruit puree
(Sweet Homemade
Strawberry Fruit Leather)**
used in all Nordic and Baltic countries

FLATBREAD DRYING

Preserving bread by drying
used in all Nordic and Baltic countries



Photo: by
View more by Andrew Poplavsky, Canva



Photo: by Promo_Link from Getty Images, Canva

RUSK

Twice-baked bread
used in all Nordic and Baltic countries



NORDIC & BALTIC PRESERVATION TECHNOLOGIES

DRYING

Air drying, freeze drying, sun drying, oven drying, dehydration



HARDTACK

Hard, dry biscuits

used in all Nordic and Baltic countries

Photo :by bhofack2 from Getty Images Canva

FLATBREAD DRYING

Preserving bread by drying

used in all Nordic and Baltic countries



Photo: by
View more by Andrew Poplavsky, Canva



Photo: by Promo_Link from Getty Images, Canva

RUSK

Twice-baked bread

used in all Nordic and Baltic countries



NORDIC & BALTIC PRESERVATION TECHNOLOGIES

CURING



BACON

Cured pork belly

used in all Nordic and Baltic countries

Photo :by Lecic from Getty Images Canva

SKINKA

Cured ham

used in Sweden



Photo: by Vby Edward Olive, Canva



Photo: by 4kodiak from Getty Images, Canva

SALAMI

Cured sausage

used in Denmark, Sweden, Norway



NORDIC & BALTIC PRESERVATION TECHNOLOGIES

CURING



SPEKEMAT

Norwegian cured meat
used in all Nordic and Baltic countries

Photo :by Lecic from Getty Images Canva

SAUCISSON

French-style cured sausage
adapted in Nordic regions
used in Norway



Photo: by PicturePartners from Getty Images, Canva



RULLEPØLSE
Rolled, spiced, and cured pork
belly
used in Denmark

Photo: by 4kodiak from Getty Images, Canva



NORDIC & BALTIC PRESERVATION TECHNOLOGIES

CURING

Photo by Genadijs
Stirans, Canva



SUGAR CURING

Preserving with sugar

used in all Nordic and Baltic countries

**Fresh cranberry in sugar - Latvian
cuisine**



Photo :by Elena Photo Canva

MOLASSES CURING

Preserving with molasses

used in all Nordic and Baltic countries



Photo: by Vby Edward Olive, Canva

LEVERPOSTEJ

Liver pâté

used in Denmark



Photo: by 4kodiak from Getty Images, Canva



NORDIC & BALTIC PRESERVATION TECHNOLOGIES

CURING



Photo :by Africa images, Canva

LIVER SAUSAGE

Sausage made with liver
used in all Nordic and Baltic countries

BLOOD SAUSAGE

Sausage made with blood
used in all Nordic and Baltic countries



Photo: by JacquesPALUT from Getty Images, Canva



BLODPUDDING

Blood pudding

Bloodpudding is one of traditional Swedish dishes made with animal blood. It is typically prepared with pig blood that is mixed with flour, beer or svagdricka, butter, and seasonings, then cooked in the oven. Once prepared, it is thinly sliced and fried with a little butter or oil until slightly crispy on the surface.

used in Sweden



NORDIC & BALTIC PRESERVATION TECHNOLOGIES

CURING



MEAT IN ASPIC

Aspic is made of the bones and parts like legs and ankles, sometimes heads, tails as natural gelatin. Aspic can be more tough for longer preservation (1-2 weeks) and jelly-like for immediate consumption, influenced by other cuisines'

used in the Baltic countries

Photo :by shoot_nik from Getty Images, Canva

FISH IN ASPIC

influences by other cuisines;
aspic can be natural of the fish bones,
heads, fins or with gelatin.

used in all Nordic and Baltic countries



Photo: by perednianskina from Getty Images, Canva

POULTRY IN ASPIC

Chicken in aspic

Influenced by other cuisines;
to achieve natural aspic of poultry should be boiled
more than 8 hours; can be cooked with gelatin too;

used in Sweden





NORDIC & BALTIC PRESERVATION TECHNOLOGIES

CURING

used in all Nordic and Baltic countries

SYLTA

Head cheese or brawn

Head cheese (Dutch: hoofdkaas) or brawn is a cold cut terrine or meat jelly that originated in Europe, perhaps ancient Germania. It is made with flesh from the head of a calf or pig (less commonly a sheep or cow), typically set in aspic, and usually eaten cold, at room temperature, or in a sandwich. Despite its name, the dish is not a cheese and contains no dairy products. The parts of the head used vary, and may include the tongue but do not commonly include the brain, eyes or ears.

used in Denmark



Photo :by Africa images, Canva

CAVIAR

Salted fish eggs

used in all Nordic and Baltic countries
(also imported black caviar is consumed in the Baltic countries)



Photo: by Woloha from Getty Images, Canva

ROE

Fish eggs

(for example, pickled herring roe is used in the Baltic countries)

used in all Nordic and Baltic countries



Photoby Jonathan Austin Daniels from Getty Images Signature, Canva



NORDIC & BALTIC PRESERVATION TECHNOLOGIES

CONFITING

Cooking and preserving in fat



Photo :by vm2002, Canva

GHEE

Clarified butter

less common, not traditional in Nordic and Baltic countries

LARD

Rendered pig fat

(used in all Nordic and Baltic countries)



Photo: by vikif from Getty Imagesy, Canva



Photo: by DimaSobko from Getty Images, Canva

TALLOW

Rendered beef or mutton fat

used in all Nordic and Baltic countries

Differences in preservation technologies of the Nordic and Baltic regions

VEGETABLE PRESERVATION

Nordic: Root vegetables like potatoes, carrots, and turnips are stored in root cellars and sometimes fermented. Pickling is also used but is not as dominant as in the Baltic region.

Baltic: Vegetables are often pickled or fermented, with cabbage, beets, and cucumbers being common examples. The Baltic tradition of pickling a wide variety of vegetables is a key distinction.



Nordic/Baltic added value
Project ID: NPAD-2022/10049

100% NO LEFTOVER

Photo by [_nakonechnyy_](#) from [Getty Images](#), Canva.

Differences in preservation technologies of the Nordic and Baltic regions

FRUIT AND BERRY PRESERVATION

Nordic: In the Nordic region, berries like lingonberries and cloudbberries are often preserved in jams, jellies, and syrups. The use of these berries in sauces and desserts is widespread.

Baltic: The Baltic region also preserves a variety of berries, but there is a stronger tradition of making berry wines and fermented berry beverages. Pickling fruits like apples and plums is also common.

Nordic/Baltic added value
Project ID: NPAD-2022/10049

100% NO LEFTOVER

Photo by Dar1930 from Getty Images, Canva.





NORDIC & BALTIC PRESERVATION TECHNOLOGIES

CANNING AND PRESERVING

Preserving food in sealed jars or cans
used in all Nordic and Baltic countries



Photo :by jarmoluk from pixabay, Canva

JAM MAKING

Preserving fruit with sugar
used in all Nordic and Baltic countries

MARMALADE

**Preserving citrus fruits with
sugar**
(used in all Nordic and Baltic countries)



Photo: by Dragunov1981 from Getty Images, Canva

PRESERVES

**General term for fruit preserved
with sugar**
used in all Nordic and Baltic countries



Photo: by Sarsmis from Getty Images, Canva



NORDIC & BALTIC PRESERVATION TECHNOLOGIES

CANNING AND PRESERVING

Preserving food in sealed jars or cans
used in all Nordic and Baltic countries



COMPOTE

Preserving fruit with sugar
used in all Nordic and Baltic countries

Photo : by sobolichall from Getty Images, Canva

LINGONBERRY PRESERVES

Lingonberries preserved with sugar

used in Sweden, Finland



Photo: by bhofack2 from Getty Images, Canva



Photo: by RolfAasa from Getty Images Signature, Canva

LINGONBERRY

Lingonberries preserved with sugar

used in Sweden, Finland



NORDIC & BALTIC PRESERVATION TECHNOLOGIES

PRESERVING IN ALCOHOL AND VINEGAR

used in all Nordic and Baltic countries

VINEGAR MAKING



Photo :by Olivka888 from Getty Images, Canva

APPLE CIDER VINEGAR

Preserving by converting
alcohol to vinegar
(apple cider vinegar)

used in all Nordic and Baltic countries



MALT VINEGAR

Vinegar made from malted
barley

used in all Nordic and Baltic countries



Photo: by new look casting from Getty Images Signature, Canva



Photo: by billdoss from Getty Images, Canva

BEER BREWING

Fermenting grains to make
beer

used in all Nordic and Baltic countries



NORDIC & BALTIC PRESERVATION TECHNOLOGIES

SPIRITS

used in all Nordic and Baltic countries



Photo :by pembilton from Getty Images, Canva

SCHNAPPS
Distilled spirit often
flavored with herbs or
fruit

used in all Nordic and Baltic
countries



Photo by GoodLifeStudio from
Getty Images Signature, Canva

AQUAVIT

Distilled spirit flavored with
caraway

used in Denmark, Norway, Sweden



Photo: by Szakaly from Getty Images, Canva



Photo: by fotomem from Getty Images, Canva

HOME DISTILLING

Small-scale distillation for
preserving alcoholic
beverages

used in all Nordic and Baltic countries



NORDIC & BALTIC PRESERVATION TECHNOLOGIES

OTHER TECHNOLOGIES



LUTEFISK

Dried fish reconstituted in lye

**Fish Rack with dried fish (Lutefisk)
on Lofoten Islands of Norway**
used in Norway

Photo: by pembilton from Getty Images, Canva

ROOT CELLAR STORAGE

Storing vegetables in a cool,
dark place

used in all Nordic and Baltic countries



Photo: by pixelshot, Canva
Photo by cpjanes from Getty Images, Canva



POTATO STARCH

Preserving potatoes by
converting them to starch
used in all Nordic and Baltic countries

Photo: byYelenaYemchuk from Getty Images Pro, Canva



NORDIC & BALTIC PRESERVATION TECHNOLOGIES

OTHER TECHNOLOGIES



Photo :by Everyday better to do everything you love from Getty Images, Canva

PECTIN EXTRACTION

Extracting pectin from fruit for jam making

used in all Nordic and Baltic countries

Photo: by bdsph from Getty Images Pro, Canva

MUSTARD MAKING

Preserving mustard seeds as a condiment

used in all Nordic and Baltic countries



Photo by victoriya89 from Getty Images, Canva



Photo: by eskymaks from Getty Images, Canva

HORSERADISH

Preserving grated horseradish root

used in all Nordic and Baltic countries



NORDIC & BALTIC PRESERVATION TECHNOLOGIES

OTHER TECHNOLOGIES

HONEY PRESERVATION



Using honey to preserve fruit or nuts
for example, quince in honey - used in Latvia
used in all Nordic and Baltic countries



Photo by UserG115542684 from Getty Images,, Canva

Photo: by bdsph from Getty Images Pro, Canva

Photo :by Everyday better to do everything you love from Getty Images, Canva

CLOTTED CREAM

Thick cream
used in all Nordic and Baltic countries



Photo View more by Vladimir Mironov Canva



Photo: by Daniel Jara from Getty Images, Canva

KIVIAK

Fermented seabirds

Kiviak or kiviaq is a traditional wintertime Inuit food from Greenland that is made of little auks (Alle alle), a type of seabird, fermented in a seal skin.
Photos of the preserving process - look in the Internet.
used in Greenland

Summary of the key differences in preservation technologies

- **Fermentation:** Emphasized heavily in Lithuania, Latvia, Sweden, and Iceland, with unique products like kvass, skyr, and surströmming.
- **Drying:** Crucial in Iceland, Norway, and the Faroe Islands, particularly for fish.
- **Smoking:** Widely used across all regions but with local variations in fish, meat, and even cheese.
- **Pickling:** Especially prominent in Denmark, Sweden, and the Baltic states (Latvia, Estonia).
- **Salting:** A common method throughout but particularly significant in coastal regions like Iceland and the Faroe Islands.
- **Freezing:** Naturally used in Greenland due to the cold climate.

The food preservation methods in the Nordic and Baltic regions, while sharing many similarities due to their geographic proximity and climatic conditions, also have distinct differences influenced by local traditions, available resources, and cultural practices. Here's an overview of these differences.

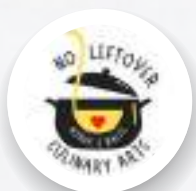
Each region adapts these techniques to their specific climate, available resources, and cultural preferences, leading to a rich and diverse culinary tradition across the Nordic and Baltic regions.

While the Nordic and Baltic regions share many food preservation techniques, the specific methods and the types of foods preserved reflect their unique cultural and environmental contexts. Nordic preservation often emphasizes dairy and fish fermentation, as well as the use of specific smoking techniques. In contrast, the Baltic region showcases a broader array of pickled vegetables and fermented beverages, along with hot smoking methods. These differences highlight the diverse culinary heritage of these neighboring regions.

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Summary

This digital brochure 'The traditional and contemporary food preservation technologies from Nordic/Baltic cuisine' is the part of the project NPAD-2022/10049 development results within the framework of the digital course 'Digital Course in NO LEFTOVER Nordic/Baltic Culinary Arts for Adult Educators'. The purpose is to improve methods of adult teaching, adults' access to learning, improving the quality of adult learning and meeting new or changing needs for the changing environment of specifics of hospitality business offers, culinary arts variety and diversification approaches, trends in tourism for new experiences and tastes, modern society needs for technical and digital enhancement and reformatting, the focus on sustainability to sustain the traditions and cultural heritage as well as global and national resources by responsible consumption and using local ingredients and other resources.

This digital brochure provides a review of over 100 traditional preservation techniques with NO LEFTOVER concept from Denmark, Estonia, Latvia, Iceland and Lithuania, with 10 recipes from each listed country. In addition, the brochure includes the recipes from Finland, Sweden, Norway, Greenland and Faroe Islands. These techniques include salting, curing, pickling, fermentation, smoking, drying, confiting, canning, and other techniques.

The main concept of traditional preservation techniques selection is usage of the 100% of raw materials. Therefore, many listed recipes includes several techniques for one product menu to demonstrate more applications in the various forms exactly in the traditional form that can lead to minimising leftovers considering different methods of fermentation, preservation, usage of different parts of the raw materials and waste management. The recipes bring forward the ideology of the outlook of the raw materials to see the beauty of the nature, considering consuming less meat and fish and motivating for agricultural, gardening and outside walking activities.

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Conclusion

This digital brochure "The traditional and contemporary food preservation technologies from Nordic/Baltic cuisine" as the part of the project NPAD-2022/10049 contains over the 100 preservation techniques grouped and listed with NO LEFTOVER concept from Denmark, Estonia, Latvia, Iceland and Lithuania with pictures and explanations of the methods and techniques, products from each listed country. In addition, the brochure includes the preservation techniques and recipes from Finland, Sweden, Norway, Greenland and Faroe Islands.

The main concept of preservation techniques' selection is usage of the 100% of raw materials with sharing experiences and traditions between the Nordic and Baltic countries and generating inspiration for usage these techniques in different regions considering traditional and new innovative forms. Therefore, many listed recipes includes several recipes for one product menu to demonstrate more applications in the various forms exactly in the traditional form that can lead to minimising leftovers considering different methods of fermentation, preservation, usage of different parts of the raw materials and and waste. The recipes bring forward the ideology of the outlook of the raw materials to see the beauty of the nature, considering consuming less meat and fish and motivating for agricultural, gardening and outside walking activities.



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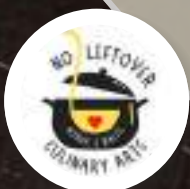
Reference List

- **Aloysius, N., Ananda, J., Mitsis, A., Pearson, D. (2023).** Why people are bad at leftover food management? A systematic literature review and a framework to analyze household leftover food waste generation behavior. Science Direct. Available at <https://doi.org/10.1016/j.appet.2023.106577>
- **Arctic Adventures. (2022).** Icelandic Food. Available at <https://adventures.is/blog/icelandic-food/>
- **Balcere, A., Sēja, G. (2014).** Zivju ēdieni. Izvēle, apstrāde, receptes. Rīga: Apgāds Zvaigzne ABC. ISBN: 978-9934-0-4122-8.
- **Baltic Sea Cuisine. (2024).** Available at <https://www.balticseaculinary.com/en>
- **Baltic Sea Cuisine. (2024).** Handbooks. Available at <https://www.balticseaculinary.com/handbooks>
- **Baltic Sea Cuisine. (2024).** Baltic Sea Culinary Routes. Available at <https://www.balticseaculinary.com/joint-activities>
- **Bianchi, G., Pisiotis, U., Cabrera Giraldez, M. (2022).** GreenComp – The European sustainability competence framework. Bacigalupo, M., Punie, Y. (editors), EUR 30955 EN, Publications Office of the European Union, Luxembourg; ISBN 978-92-76-46485-3, doi:10.2760/13286, JRC128040. Available at https://publications.jrc.ec.europa.eu/repository/bitstream/JRC128040/JRC128040_001.pdf
- **Chef Eram, Senior Sous Chef, Academy of Pastry and Culinary Arts. (2023).** The Intersection of Culinary Arts and Technology: Innovations in Culinary Education. Available at <https://www.expresscomputer.in/guest-blogs/the-intersection-of-culinary-arts-and-technology-innovations-in-culinary-education/104718/>
- **Climatesmartchefs.eu. (n/d).** How can chefs help to save the planet. Available at <https://climatesmartchefs.eu/wp-content/uploads/2022/05/How-can-chefs-help-to-save-the-planet.pdf>
- **Compotes. Jams. Juices. Kompoti. Ievārījumi. Sulas.** Rīga: Apgads Zvaigzne ABC. ISBN 978-9934-0-2722-2.
- **Culinary Heritage Network. (2024).** Available at <https://www.culinaryheritage.net/>
- **Deb Dulal Das (2023).** Discover How Local Sourcing is Revolutionizing Sustainable Businesses. Available at <https://www.dragonsourcing.com/discover-how-local-sourcing-is-revolutionizing-sustainable-businesses/>
- **Galēja, I. (2012).** Easter dishes. Lieldienu ēdieni. Rīga: Apgads Zvaigzne ABC.
- **Gift in a jar. Dāvana burciņā.** Rīga: Apgads Zvaigzne ABC. ISBN: 978-9934-0-2681-2.
- **Gilman, S.A. (n/d.)** A World of Flavor: 7 Traditional Foods of Greenland. Available at <https://world.expeditions.com/expedition-stories/stories/a-world-of-flavor-7-traditional-foods-of-greenland>
- **Grèzes-Bürcher, S., Grèzes, G. (2023).** Designing a Sustainable, Circular Culinary System. Available at <https://link.springer.com/article/10.1007/s43615-023-00295-w>

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Reference List

- **Guide to Faroe Islands. (2024).** Your Complete Faroe Islands Food Culture Guide. Available at <https://guidetofaroeislands.fo/history-culture/faroe-islands-food-guide/>
- **Jaramišjans, S. (2011).** Raw foodism. Basic recipes from products available in Latvia. Svaigēšana. Pamatreceptes no Latvijā pieejamiem produktiem. Rīga: Apgads Zvaigzne ABC. ISBN 978-9934-0-2261-6.
- **Latvian Cuisine. (2024).** Available at <https://www.balticseaaculinary.com/countries/LVA>
- **Latvijas Vides ģeoloģijas un meteoroloģijas centrs (n.d.)** Meteoroloģiskās sezonas Latvijā. Available at <https://videscentrs.lvgmc.lv/lapas/meteorologiskas-sezonas-latvija> on December 19, 2022.
- **Mahfud, T., Pardjono, & Lastariwati, B. (2019).** CHEF'S COMPETENCIES AS A KEY ELEMENT IN FOOD TOURISM SUCCESS: A SHORT LITERATURE REVIEW. *GeoJournal of Tourism and Geosites*, 26(3), 1057-1071. <https://doi.org/10.30892/gtg.26329-417>. Available at <https://publications.jrc.ec.europa.eu/repository/handle/JRC128040>
- **Maricopa Community Colleges. (n.d.)** Sustainable Cooking Lab Manual. Available at <https://open.maricopa.edu/sustainablecookinglabmanual/chapter/1-3-what-does-sustainable-cooking-mean-why-does-it-matter/>
- **Ministry of Foreign Affairs of the Republic of Lithuania. (2014, updated 2023).** Nordic-Baltic cooperation (NB8). Available at <https://urm.lt/default/en/foreign-policy/lithuania-in-the-region-and-the-world/regional-cooperation/nb8>
- **Norden. (2024).** Culinary Nordic. Available at <https://www.norden.org/en/search?query=culinary>
- **Norden. (2012).** Nordic Nutrition Recommendations 2012. Integrating nutrition and physical activity. Available at <https://norden.diva-portal.org/smash/get/diva2:745807/FULLTEXT01.pdf>
- **Nordic Expat Shop. (2023).** The Rich History of Traditional Scandinavian Food. Available at <https://nordicexpatshop.com/ENG/blog/the-rich-history-of-traditional-scandinavian-food/>
- **Latvian Statistic Bureau. Oficiālais statistikas portāls. (n.d.)** Pārtikas produktu patēriņš. Available at <https://stat.gov.lv/lv/statistikas-temas/iedzivotaji/majsaimniecibu-izdevumi/5196-partikas-produktu-paterins>.
- **Olaines I. vidusskola. Traditional Latvian Cuisine. (n/d).** Erasmus+ project "Transmitting our cultural heritages to new generations". Available at http://www.oivsk.lv/uploads/file/starpt_projekt/Mantojums/Itaalija/Traditional_cuisine_latvia_MD.pdf
- **Pīgozne, I. (2022).** Nacionālā virtuve Latvijā. Nacionālā enciklopēdija. Available at <https://enciklopedija.lv/skirklis/4980-nacion%C4%81%C4%81-virtuve-Latvij%C4%81>.
- **Policy tools for sustainable and healthy eating – Enabling a food transition in the Nordic countries.** Available at <https://nordregio.org/publications/policy-tools-for-sustainable-and-healthy-eating-enabling-a-food-transition-in-the-nordic-countries/>

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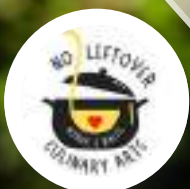
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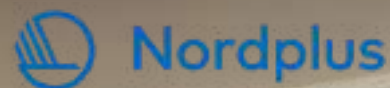
Reference List

- **Popila, A. (2013)** Stevia in Latvia. Stēvija Latvijā. Rīga: Apgads Zvaigzne ABC.
- **Slow Food for Biodiversity. (2014)** / Ræstur Fiskur. Ark of taste. Available at [https://www.fondazione Slow Food.com/en/ark-of-taste-slow-food/raestur-fiskur/#:~:text=R%C3%A6stur%20fiskur%20\(air%2Ddried%20fermented,and%20haddock%20\(Melanogrammus%20aeglefinus\).](https://www.fondazione Slow Food.com/en/ark-of-taste-slow-food/raestur-fiskur/#:~:text=R%C3%A6stur%20fiskur%20(air%2Ddried%20fermented,and%20haddock%20(Melanogrammus%20aeglefinus).)
- **Statistics Denmark. (2024)**. Denmark statistics. Available at <https://www.dst.dk/en/Statistik/emner/borgere/befolkning/befolkningstal>
- **Steel, S. (2014)**. A Short Course in Preserving. Fast, easy, delicious! Īsa kursa konservēšana. Ātri, vienkārši, garšīgi! Rīga: Apgads Zvaigzne ABC. ISBN 978-9934-0-4698-8.
- **The Association of Latvian Rural Tourism “Lauku ceļotājs” (2014)**. Traditional and modern Latvian Foods and Beverages. Baltic Country Holidays. Available at https://www.celotajs.lv/cont/publ/LatviesuEdieni2014/pdf/LatviesuEdieni2014_en.pdf
- **The four season cookbook. Gadalaiku pavārgrāmata. (2008)**. Rīga: Madris. ISBN 984-31-492-8.
- **The Nordic Council and the Nordic Council of Ministers. (2024)**. Nordic Region. Facts about the Nordic countries. Available at <https://www.norden.org/en/information/facts-about-nordic-countries>
- **The Nordic Council of Ministers. (2020)**. Eight megatrends in Nordic-Baltic food systems. Available at <https://norden.diva-portal.org/smash/get/diva2:1506755/FULLTEXT01.pdf>
- **The Nordic Council of Ministers. (2020)**. Action plan for Vision 2030. Available at <https://www.norden.org/en/publication/nordic-region-towards-being-most-sustainable-and-integrated-region-world>
- **The SDG Fund. (n.d.)** Challenge 2: Use Local. Available at <https://www.sdgfund.org/challenge-2-use-local-produce>
- **Visitfaroeislands.com. (2024)**. Faroese Food. Available at <https://visitfaroeislands.com/en/about1/people-society/faroese-food>
- **Will fly for food. (2024)**. Latvian Food: 15 Traditional Dishes to Look for in Riga. Available at <https://www.willflyforfood.net/latvian-food/>
- **Worlddata.com (2024)**. Denmark territory. Available at <https://www.worlddata.info/europe/denmark/index.php>
- **Zeidan, A. (2024)**. Nordic countries. Britannica. Available at <https://www.britannica.com/place/Nordic-countries>
- **Zemītis G., Strenga G., Straube G., Šiliņš J., Krūmiņš G. (2016)**. Ieskats Latvijas vēstures svarīgākajos jautājumos. Valsts kanceleja. Available at <https://www.mk.gov.lv/lv/media/76/download>
- **Zuberbuehler, A. (n/d)**. Q: What is Culinary Arts?. Available at <https://hospitalityinsights.ehl.edu/culinary-arts>





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THE TRADITIONAL AND CONTEMPORARY FOOD PRESERVATION TECHNOLOGIES FROM NORDIC/BALTIC CUISINE

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