



Baked Bars and Cookies

The snacks market is in a constant state of growth. It's reported by Market Data Forecast that by 2023 the cookie market was worth around 219.42 billion USD, and it's anticipated to have an increased value of 286.78 billion USD by 2028 with a CAGR of 5.5% for the period comprehended from 2023 to 2028. For its part, the baked bars market was valued at around 46.50 billion USD in 2022, with an expected growth to 75.83 billion USD by 2029, and an expected CAGR of 6.37% for the 2022-2029 periods according to Fortune Business Insights.

Current market trends for bakery products both sweet and savory tend to be healthier, low sugar, and high protein wholesome products. Bakers need to remain focused and informed on newer technologies that have developed to be able to successfully satisfy consumers' needs. Therefore, a need for more easily and available information on how to accomplish this helps to maintain the wholesomeness of traditional baked goods, while providing substantial health benefits.



Baked Bars and Cookie Ingredient Functionality

Snack bars are made with a variety of ingredients including:

Ingredients	Function
Flour (all-purpose, oats)	Provides structure and texture
Sugar (brown, white)	Sweetness, browning and texture
Eggs	Binds ingredients together; adds aroma
Butter or oil	Adds moisture and richness; enhances flavor
Baking powder/soda	Provides volumes and an airy texture
Salt	Balances sweetness and enhances flavor
Nuts (almonds, walnuts)	Adds crunch, texture, and flavor
Chocolate (chips, chunks)	Provides sweetness and richness; adds flavor
Dried fruits (raisins, cranberries)	Adds sweetness and chewiness; provides bursts of flavor
Vanilla extract	Enhances flavor profile
Spices (cinnamon, nutmeg)	Adds flavor and natural preservation
Sweeteners (honey, maple syrup)	Provides sweetness and moisture
Oats	Adds texture and chewiness; provides fiber

Vantage® Food's Release Agents revolutionize your production process by preventing sticking, ensuring consistent quality, and boosting your sustainability efforts. Experience smoother operations, uniform products, and less waste—discover how our release agents can elevate your efficiency today. [Learn more here!](#)

Cookies are made with a variety of ingredients including:

Ingredients	Function
Flour (all-purpose)	Provides structure and bulk
Sugar (granulated, brown)	Sweetens and adds moisture
Butter or margarine	Adds flavor, richness, and moisture; tenderizes
Eggs	Binds ingredients together; adds moisture and richness
Baking powder or baking soda	Leavening agent, helps cookies rise
Salt	Balances sweetness and enhances flavor
Vanilla extract	Enhances flavor profile
Chocolate chips or chunks	Adds sweetness and richness; provides bursts of flavor
Nuts (walnuts, almonds)	Adds crunch, texture, and flavor
Oats	Adds texture and chewiness; provides fiber
Cocoa powder	Adds chocolate flavor and color
Flour (all-purpose)	Provides structure and bulk
Sugar (granulated, brown)	Sweetens and adds moisture

Cookies and baked bars come in a wide variety of shapes and forms, they can be topped with chocolate chips, dried fruit, and nuts as mentioned before. However, they can also be topped with sprinkles, glaze, or icings. Proper consideration needs to be taken into account when deciding which ingredient to use, due to their cross-functionalities.

Icings, frosting, or glaze are sweet toppings usually added to baked goods to compliment their flavor and texture. Usually made from sugar and a liquid (e.g. water or milk), they can have other ingredients such as eggs, butter, flavoring, and colors to add a novel texture and style.

A wide variety of types of frosting/icings are available for snack bars and cookies, ranging from royal icing to buttercream. Icing stability is a challenge usually confronted by bakes and industrial bakeries, keeping the aspect of the finished product is key to consumers' acceptance and thus a perfect-looking icing is of utmost importance.

Icing stabilizers are ingredients added to frosting/icings to improve stability and, elasticity, and anti-sticking or setting properties. Commonly made from hydrocolloids, gums, sorbates, and other emulsifiers; they allow bakeries around the world to provide consumers with consistently high-quality products.

Perma-Frost™ from Vantage® Food is a versatile icing stabilizer crafted to preserve the integrity and appearance of your icings and glazes. It ensures a consistent shine and prevents defects like cracking and separation. Ensure a flawless finish for your baked goods - [Learn more here!](#)



Production Process of Baked Bars and Cookies

BAKED BARS

- 1. Ingredient Preparation:** measure and gather all ingredients according to the recipe. Pre-process ingredients such as chopping nuts, melting butter, or soaking dried fruit if necessary.
- 2. Mixing:** combine dry ingredients (flour, sugar, baking powder, salt, spices) in a mixing bowl. In a separate bowl, mix wet ingredients (eggs, melted butter or oil, vanilla extract, sweeteners) until well combined. Gradually add the wet ingredients to the dry ingredients, stirring until a cohesive dough or batter forms.
- 3. Incorporating Add-ins:** fold in additional ingredients like nuts, chocolate chips, or dried fruits to the dough or batter.
- 4. Molding or extruding:** transfer the dough or batter to the prepared baking pans.
- 5. Baking:** place the filled baking pans in the preheated oven and bake to above the kill step of 74 °C (165 °F). Monitor baking time and adjust as needed to achieve desired doneness.
- 6. Cooling:** once baked, remove the bars from the oven and allow them to cool completely in the pan on a wire rack. Cooling helps the bars set and firm up before cutting.
- 7. Cutting and Packaging:** once cooled, use a sharp knife to cut the baked bars into individual servings or desired shapes. Package the bars in airtight containers or wrap them individually for freshness and convenience.
- 8. Storage:** store the baked bars at room temperature, in the refrigerator, or freezer, depending on the type and desired shelf life.



COOKIES

- 1. Ingredient Preparation:** measure and gather all ingredients according to the formula. Pre-process ingredients such as chopping nuts, melting butter, or sifting flour if necessary.
- 2. Mixing:** combine dry ingredients (flour, sugar, baking powder/soda, salt) in a mixing bowl. In a separate bowl, cream together fat (butter or margarine) and sugar until light and fluffy. Gradually add the dry ingredients to the wet ingredients, mixing until a dough forms.
- 3. Incorporating Add-ins:** fold in additional ingredients like chocolate chips, nuts, or dried fruits to the cookie dough.
- 4. Shaping:** depositing: a wire cutter cookie depositor or cookie extruder can be used to uniformly deposit cookies onto cookie sheets.
- 5. Baking:** baked in a tunnel or rack oven at 190°C (375°F) for around 12-15 mins.
- 6. Cooling:** once baked, remove cookies from the baking pan and cool immediately on the wire rack to eliminate residual cooking on the pans.
- 7. Packaging:** once cooled, package the cookies immediately when the internal temperature reaches 38°C or 100°F
- 8. Storage:** store the cookies at room temperature in a cool, dry place for several days, or freeze them for longer-term storage.



High Protein Baked Bars and Cookies

Current health trends have caused an increase in the need for novel high-protein formulations of several food products including baked goods. Baked bars present themselves as promising vehicles to increase protein consumption due to their easy and affordable shape. However, as with other baked goods, an increase in protein content in baked bars may present technological and functional issues due to the potential increase in the toughness of the products and the need to increase the moisture content to counteract this inconvenience.

Adding a protein source to a baked good must be done with care and consideration. The hydration and elasticity of the dough as well as the gluten matrix could be affected. Common sources used to increase protein content are:

- Chickpea powder (25-28% protein)
- Faba Bean powder (20% protein)
- Pea Protein Powder (75% protein)
- Lupin Flour (36% protein)
- Soy protein Isolate (88% protein)
- Chia Protein (40-45% protein)
- Barley (12% protein)
- Wheat Protein (11-90% protein)

Successfully adding protein to bars and cookies requires looking at the function of key ingredients and adjusting the formula accordingly. Some minor adjustments and additions can go a long way in increasing the overall nutrition of the final product. Adding ingredients like chia flour to increase protein and fiber, or using alternative sweeteners like allulose is a great place to start.

Recent research on the development of high protein and low-calorie cookies with wheat flour substitution like defatted soy flour showed an increase in thickness and hardness of cookies made with the conventional creaming method, while the weight, diameter, spread ratio, and spread factor decreased with increasing levels of the defatted soy flour (high in protein). A substitution of around 20% of the wheat flour with the defatted soy flour showed the best results from all the developed formulations.

Summary

Baked bars and cookies are convenient handheld snacks that can be consumed on the go, during exercise, or as an emergency food source. As families juggle more in their daily lives, there is a growing need to provide high-quality, high-protein snacks that are portable. Finding the right ingredients to improve the nutritional profile of portable baked snacks is the biggest challenge. We hope this paper summarizes the solutions for you.

References

1. Itd, Market Data Forecast. "Cookies Market: Size, Share, Growth: 2023-2028." Market Data Forecast, www.marketdataforecast.com/market-reports/cookies-market. Accessed 16 Oct. 2023.
2. "Baked Savory Snacks Market Size, Share and COVID-19 Impact Analysis, By Product (Chips & Crisps, Nuts & Seeds, Popcorn, and Others), By Distribution Channel (Supermarkets & Hypermarkets, Convenience Stores, Online Retail, and Others), and Regional Forecast, 2022-2029." Baked Savory Snacks Market Size, Share, Growth | Trends, 2029, www.fortunebusinessinsights.com/baked-savoury-snacks-market-103248. Accessed 16 Oct. 2023.
3. "Snack Bars: Baking Process." BAKERpedia, 23 Feb. 2024, bakerpedia.com/processes/snack-bars/. Accessed 02 May 2024.
4. "Chocolate Chip Cookies: Baking Process." BAKERpedia, 21 Feb. 2024, bakerpedia.com/processes/chocolate-chip-cookies/. Accessed 02 May 2024.
5. "High Protein Baking: Baking Ingredients." BAKERpedia, 21 Feb. 2024, bakerpedia.com/ingredients/high-protein-baking/#:~:text=Protein%20is%20an%20important%20nutrient,and%20quality%20of%20bak ed%20goods. Accessed 02 May 2024.
6. Kulthe, Amit Arjun, et al. "Development of high protein and low-calorie cookies." *Journal of food science and technology* 51 (2014): 153-157.

Sponsored by VANTAGE FOODS is a market leader offering customized solutions, in-house research and development, and an extensive portfolio of food processing ingredients. Their offerings include release agents, emulsifiers, stabilizers, processing aids, shortenings, esters, polysorbates, antifoams, specialty ingredients, spraying equipment, and much more. [Learn more!](#)