Herbal Oil Antioxidants Co. (Herbanol)

Neyshabour, Iran

Under the supervision of Binalood Golden Oil Co. and Neyshabour Sepid Dasht Co.

Company Summary

Binalood Golden Oil Co. and Neyshabour Sepid Dasht Co. are two significant edible oil producers in Iran.
Their activities include oilseed extraction, refining, and the production and distribution of cottonseed oil and meal products. Both companies have more than 20 years of production history, and Binalood Golden Oil is one of the three major vegetable oil producers in Iran.
Herbanol was established under the supervision of Binalood Golden Oil to research how natural plant-based antioxidants can slow the oxidation of edible oils.

1-Executive Summary

Synthetic antioxidants such as TBHQ and BHT are widely added to edible oils to delay oxidation and rancidity. Their use is regulated and varies by market, and a growing group of consumers, retailers and food brands is looking for cleaner, plant-based alternatives. Herbanol, the research arm of Binalood Golden Oil Co., is developing natural antioxidant formulations based on plant essential oils and extracts that can replace or reduce synthetic antioxidants in edible oils.

The product is at laboratory stage. The next steps are pilot-scale validation of oxidative stability, regulatory approval in each target market, and first supply agreements. Market studies support the opportunity: published estimates put the global natural antioxidants market at roughly US$1.2–1.8 billion in 2025, growing about 4–6.5% a year, while rosemary-extract-based systems, the closest natural benchmark for oils, are growing faster, at about 8–9% a year.

Company Information

Founded:

The parent company was established on 23-08-1997. The antioxidant division began later as a dedicated research project.

Employees:

- ✓ Mr. Mohsen Shams
- ✓ Mrs. Maryam Sanjari
- ✓ Mrs. Melika Sereshki
- ✓ Mrs. Farvah Fereidounfar
- ✓ Ms. Elmira Nouri

Revenue Stage:

Laboratory / pilot stage (antioxidant line)

2-Management

The team combines oilseed processing know-how from the parent companies with in-house laboratory research capability.

- **Mr. Mohsen Shams** – General Manager
- **Mrs. Maryam Sanjari** – Director and Manager, Research and Development
- **Mrs. Melika Sarshaki** – Food Quality Control
- **Mrs. Farvah Fereidounfar**-Pharmaceutical chemistry researcher
- **Ms. Elmira Nouri** – Chemist

Gaps to fill as the company moves toward commercialization: a regulatory affairs specialist (food additive submissions) and an export sales lead based in, or experienced with, the target market.

3-Customer Problem

Edible oils are among the most widely consumed foods and are prone to oxidation. Oxidation creates rancid flavours and odours, shortens shelf life, reduces nutritional quality and forms undesirable compounds. Oil producers mainly control it with synthetic antioxidants (TBHQ, BHT, BHA), which are limited by regulation and are increasingly unwelcome on ingredient lists.

At the same time, food manufacturers and retailers face rising consumer demand for clean-label, plant-based products. Oil producers therefore need a natural antioxidant that is effective, cost-competitive, approved in their market and consistent from batch to batch.

4-Product / Services

Herbanol is developing natural antioxidant formulations based on plant essential oils and extracts, dosed into refined edible oil at the end of production, just before packaging. Established natural systems such as rosemary extract (carnosic acid and carnosol) and mixed tocopherols already show that plant antioxidants can reduce peroxide formation and delay rancidity, which gives our approach a sound scientific base. Our aim is to differentiate through blends tuned to specific oils (cottonseed, canola, sunflower, soybean) and through documented performance data.

Current status: formulations are produced and tested at laboratory scale in the Binalood research centre. The main income of the group comes from cottonseed oil, and about 20% comes from herbal essential oils. The research team keeps updating the formulations as market and regulatory conditions change.

Proof of performance: each formulation will be benchmarked against TBHQ/BHT and untreated oil using standard oxidative stability tests: Rancimat induction time, Schaal oven (accelerated storage) test, peroxide value, p-anisidine value, TOTOX and free fatty acids.

5-Target Market

Our primary customers are edible oil refiners and packers. Secondary customers are food manufacturers that use large volumes of frying and cooking oils (snacks, bakery, fried foods, spreads) and health and nutrition product companies. The best first customers are producers that already sell clean-label or organic products, or that face retailer pressure to remove synthetic additives, and that will accept a modest price premium for a natural label because they have their own loyal consumer base.

Market entry will be phased. First, validation on the production lines of our parent company, Binalood Golden Oil, which provides an industrial-scale test site and a first customer. Second, entry into the Canadian market (Manitoba and the Prairie canola belt, then Ontario), where oilseed processing is concentrated. Third, additional export markets selected after the regulatory review in Section 6-4.

6-Sales and Marketing Strategy

6-1-Customers

Our customers are edible oil producers who add antioxidants at the last stage of production, before packaging. Target prospects in Canada include Sunora Foods, Cargill's Canadian oilseed operations and other canola and vegetable oil processors. Industry bodies such as the Canola Council of Canada and Alberta Canola are not buyers, but they are valuable channels for introductions and technical trials.

These companies are prospects, not signed customers. The product is at laboratory stage, and commercial sales can begin only after pilot validation and regulatory approval. Revenue assumptions in Section 8 should be read with this in mind.

6-2-Suppliers

Our raw materials are food-grade plant essential oils and extracts, tocopherols and carrier oils. For the pilot stage we will buy standardized, food-grade materials with a certificate of analysis for every lot, so that results are repeatable. Canadian distributors identified so far, such as Aromatics Canada, New Directions Aromatics, Pranarom Canada and Rae Dunphy Aromatics, can supply research-grade volumes; retail aromatherapy and soap-making suppliers are suitable only for lab samples, not for food-grade production. British Columbia, Alberta, Ontario and Quebec are the main supply regions.

In the medium term we plan to set up our own extraction unit, building on the extraction expertise of Binalood Golden Oil, and to sign long-term contracts with herb growers. This would reduce cost, secure quality and protect our formulations. We have already discussed prices with several vegetable base oil producers.

6-3-Advertising and Promotion

Our customers are businesses, so promotion will be technical and relationship-based rather than consumer advertising.

- **Technical website** with datasheets, test reports and a sample request form (the site is under development).
- **Free trial programme:** oil producers test our antioxidant in their own oil with support from our laboratory.

- **Scientific credibility:** publish stability results and present at industry events such as the AOCS Annual Meeting, SIAL Canada and IFT FIRST.
- **Partners:** ingredient distributors, Canadian incubators and accelerators, and our local marketing consultant.
- **Digital marketing:** LinkedIn, technical articles and webinars. Marketplaces such as Amazon suit small consumer packs and are a later option for essential oil retail, not for supplying oil producers.

6-4-Pricing and Distribution

We will start with cost-based pricing to secure a margin, then move to value-based pricing once test data show a clear benefit over synthetic antioxidants (clean label, longer shelf life, fewer rejected batches). Prices will be quoted per tonne of treated oil so customers can compare directly with TBHQ/BHT. Large producers will be supplied directly, and smaller accounts through ingredient distributors, in drums or IBCs with a certificate of analysis. Each batch carries a quality guarantee; non-conforming batches are replaced or refunded, and safety stock in the destination market will protect customers from delivery delays.

Regulatory pathway (Canada). Before sale, each antioxidant that acts as a food additive must be listed in Health Canada's Lists of Permitted Food Additives, and the product must comply with the Safe Food for Canadians Act (SFCA) and Regulations (SFCR), the Food and Drugs Act (FDA) and the Food and Drug Regulations (FDR), enforced by the Canadian Food Inspection Agency (CFIA). Health Canada does not yet authorize rosemary extract as an antioxidant additive. In December 2025 it proposed doing so for bakery items, snacks, nuts, dehydrated potato products and precooked noodles, but this proposal does not cover edible oils. Our formulations will therefore probably need a food additive submission for oil use. Organic claims would require separate organic certification.

Other markets. Rosemary extract and tocopherols are already permitted additives in the European Union, and rosemary extract is also approved in the United States, Australia and New Zealand, so one of these markets may offer a faster first export route. A Canada-based regulatory and marketing consultant will be engaged to confirm the best sequence.

7-Competitors and Competitive Advantage

Synthetic antioxidants (TBHQ, BHT, BHA). They are cheap, effective at low doses and well established. Price and proven performance are their strengths; consumer and retailer preference for natural ingredients is their weakness.

Established natural antioxidant suppliers. Companies such as Kalsec, Kemin, ADM and DSM-Firmenich already sell rosemary extract and tocopherol systems. They have scale, regulatory approvals and customer relationships, so we must compete on formulation fit, technical service and price.

Other risks. Imported products of similar or lower quality, brokers who can learn about our business through trading companies, and new entrants as food manufacturers become more aware of

natural ingredients. We will protect our formulations as trade secrets or patents, use confidentiality agreements with partners and brokers, and reserve part of revenue for continuous R&D.

Our advantages:

(1) the oil-processing experience and production lines of Binalood Golden Oil for industrial validation

(2) formulations tailored to specific oils, backed by test data

(3) a planned in-house extraction unit for cost and quality control

(4) a dedicated research and quality control team

8-Financials / Forecasts

	2023(f)	2024(f)	2025(f)	2026(f)	2027(f)	2028(f)
Revenue	**660,000$**	**1,000,000$**	**1,000,000$**	**1,080,000$**	**1,190,000$**	**1,330,000$**
Initial Investment	**120,000$**	**120,000$**	**120,000$**	**120,000$**	**120,000$**	**120,000$**
Expenses	**570,000$**	**360,000$**	**360,000$**	**385,000$**	**410,000$**	**440,000$**
Profit (Loss)	**90,000$**	**640,000$**	**640,000$**	**695,000$**	**780,000$**	**890,000$**

2027 forecast: scenarios and assumptions

2027(f)	Conservative	Base case	Optimistic
Revenue	1,100,000$	1,190,000$	1,300,000$
Expenses	420,000$	410,000$	450,000$
Profit	680,000$	780,000$	850,000$
Revenue growth vs 2026 (base)	+2%	+10%	+20%

- **Base case (+10%):** revenue grows from 1,080,000$ in 2026 to 1,190,000$, in line with natural antioxidant segments (rosemary extract about 8–9% a year) and slightly above as regulatory approval and the first external supply agreements take effect. Expenses rise to 410,000$ with production volume.
- **Conservative (+2%):** approval or first contracts slip; extra testing and submission costs push expenses to 420,000$.
- **Optimistic (+20%):** pilot results are strong and one or two supply agreements start during 2027; expenses of 450,000$ cover scale-up.
- **2028 (base case):** revenue +12% to 1,330,000$, expenses 440,000$, profit 890,000$. If approval is delayed, 2027 and 2028 should stay close to the 2026 level.

- **Currency:** all figures are in US dollars and assume stable exchange rates and unchanged selling prices.

9-Risks and Next Steps

- **Regulatory delay (highest risk):** approval of natural antioxidants for oil use in Canada or elsewhere may take longer than planned. Mitigation: start the submission early and prepare the EU and US routes in parallel.
- **Trade compliance:** supplying Canada, the EU or the US from Iran is subject to sanctions and export-control rules. Legal advice is needed, and a commercial entity in the target market may be required, before any contract is signed.
- **Performance and cost:** natural antioxidants can need higher doses or add colour or aroma. Mitigation: test several oils and blends and show cost per tonne of treated oil.
- **Raw material supply and price:** plant extracts vary by season and origin.
- Mitigation: standardized extracts, certificates of analysis, and the planned in-house extraction unit.