

Grape Molasses Production Line

Complete Turnkey Business Proposal



Supplier reference: real compact fruit washing, pulping and cooking equipment suitable for configured grape-syrup production.

300-500 kg/h starter fresh-grape input	65-75 °Brix typical product target	40-80 kW indicative electric and thermal load	5-8 entry operators
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Prepared for investment planning in Afghanistan and regional export markets. Final specifications, pricing, civil works, and utility loads require supplier quotation and site survey.

Executive Summary

This line turns sound Afghan grapes into shelf-stable grape molasses or concentrated grape syrup. Juice is extracted without excessive seed crushing, clarified, then concentrated to the buyer's soluble-solids target under controlled heat. A vacuum concentrator gives better color and flavor retention than long open boiling, while a jacketed kettle offers the lowest capital cost for a traditional dark style. The selected method must match the intended product, pack and market claim.

Why this project fits Afghanistan

- Afghan grapes can be converted near vineyards into a high-value pantry product with reduced fresh-fruit loss.
- Small batches suit seasonal supply and allow processors to separate grape varieties and product styles.
- Grape pomace can be kept separate for approved feed, compost or further recovery channels.
- Glass jars or food-grade bottles support retail, bakery and hospitality markets.

Sanaatchi delivery scope

- Factory setup planning, supplier pre-qualification, and technical comparison
- Complete production-line and individual equipment supply
- Factory layout, utilities, civil-work coordination, installation, and commissioning
- Raw-material sourcing, trial-batch qualification, and repeat supply planning
- International logistics, customs documentation, operator training, spare parts, and after-sales support

Recommended configuration

For the lowest credible entry, select a 300-500 kg/h grape line with washer, crusher-destemmer, press, clarification tank, steam kettle or small vacuum concentrator, pasteurizer and semi-automatic filler. Start with one defined dark or light molasses specification and prove yield, Brix, acidity, color and shelf stability through harvest trials.

Manufacturing Process & Product Portfolio

Integrated process flow



Target products

Product	Typical specification	Primary market
Traditional dark grape molasses	Buyer-approved Brix, acidity, color, flavor and no scorched note	Households, bakeries and traditional-food retailers
Light vacuum-concentrated grape syrup	Lower heat exposure with controlled color and aroma	Premium retail, pastry and hospitality buyers
Grape press cake	Fresh, traceable pomace handled without mold	Approved feed, compost or further-processing users

Industrial concentrate suppliers use washing, sorting, crushing, pressing, clarification, vacuum evaporation, sterilization and filling. Grape molasses does not require the membrane and aseptic-drum scope of a large concentrate factory. Sanaatchi's entry design uses a small batch concentrator and retail filling; heat profile, final Brix and acid balance must be validated with local grape varieties.

Core Equipment Schedule

Step	Equipment	Function	Indicative parameter
1	Grape washer and sorting table	Removes soil and rejects damaged or moldy fruit	Gentle food-grade contact with potable water
2	Crusher-destemmer	Opens berries and removes stems without excessive seed breakage	Adjustable rollers and low-speed destemming
3	Basket, bladder or belt press	Separates juice from skins and seeds	Sized for 300-500 kg/h grape intake
4	Clarification tank and filter	Reduces suspended solids before concentration	Settling, bag or plate filtration selected by product style
5	Steam-jacketed kettle or vacuum concentrator	Removes water to the approved soluble-solids target	Food-grade agitation and temperature control
6	Tubular or batch pasteurizer	Applies the validated final heat treatment	Temperature recorder and sanitary diversion
7	Semi-automatic hot filler and capper	Fills and closes jars or bottles	Two launch pack sizes
8	Refractometer and acidity test set	Controls concentration and batch release	Calibrated Brix, pH and titratable-acidity checks

Equipment models are indicative and will be matched to the selected capacity, local raw-material tests, available utilities, and preferred automation level.

Reference Equipment Gallery



Supplier reference: real compact fruit washing, pulping and cooking equipment suitable for configured grape-syrup production.



Supplier reference: real industrial fruit-juice concentration equipment showing the evaporation section used for controlled syrup production.

Images are supplier references for configuration discussion; final equipment appearance and model may differ.

Plant, Raw Materials & Utility Requirements

Raw materials

- Sound ripe Afghan grapes approved for molasses
- Potable process water
- Only permitted clarification aids where required
- Food-grade glass jars or heat-compatible bottles and closures
- Labels, tamper seals and cartons

Utilities & infrastructure

- Stable electricity
- Food-safe steam, electric or gas heat source
- Potable water and hygienic drainage
- Ventilation and safe exhaust for concentration
- Dry ingredient and finished-product storage

Quality, safety and environmental controls

- Reject moldy, fermented or pesticide-noncompliant grapes
- Record grape variety, incoming Brix, acidity and juice yield
- Avoid seed crushing and scorched flavor during extraction and concentration
- Verify final Brix, pH, acidity, color and sensory profile
- Validate pasteurization, hot-fill temperature, closure vacuum and microbiology
- Complete shelf-life trials in the exact commercial pack

A final factory layout must reserve safe forklift routes, maintenance clearances, raw-material segregation, finished-goods storage, fire protection, ventilation, and future expansion space.

Indicative Investment & Implementation Plan

LOW-ENTRY CONFIGURATION

Lowest entry uses one small crusher-press stream, simple clarification, a steam-jacketed kettle or compact vacuum concentrator and semi-automatic hot filling. Land, building, grapes, packaging inventory and laboratory certification are excluded.

Component	Indicative range	Notes
Washing, destemming, crushing and pressing	US\$6k-14k	Compact seasonal intake
Clarification and small concentration system	US\$7k-18k	Kettle is lower cost; vacuum gives better quality
Pasteurization, hot filling and capping	US\$4k-10k	Two launch formats
Electrical, steam, installation and spares	US\$3k-7k	Include sanitary hoses and instruments
Freight and clearance	US\$3k-8k	Confirm vessel dimensions
Indicative low-entry total	US\$23k-57k	Building, grapes, jars and working capital excluded

Implementation sequence

Phase 1	2-3 weeks	Confirm grape varieties, molasses style, Brix and pack sizes
Phase 2	3-4 weeks	Run extraction and concentration trials and approve yields
Phase 3	5-9 weeks	Manufacture, inspect and ship the selected line
Phase 4	3-5 weeks	Install, train, validate heat process and begin shelf-life study

Ranges are planning targets for a low-cost entry configuration, exclude land, and remain subject to confirmed capacity, supplier quotation, freight, duties, exchange rates and site conditions.

Next Steps & Contact Information

Recommended next steps

- Confirm target products, hourly output, and packaging formats
- Test representative raw materials and document quality requirements
- Complete site survey covering electricity, water, fuel, drainage, roads, and warehouse space
- Request comparable technical and commercial quotations from shortlisted suppliers
- Finalize financing, logistics, installation, training, and spare-parts plan

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Research and image references

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