

PROJECT REPORT

Of

FRUIT VINEGAR

PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding **Fruit Vinegar**.

The objective of the pre-feasibility report is primarily to facilitate potential entrepreneurs in project identification for investment and in order to serve his objective; the document covers various aspects of the project concept development, start-up, marketing, finance and management.

[We can modify the project capacity and project cost as per your requirement. We can also prepare project report on any subject as per your requirement.]



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PROJECT AT A GLANCE

- 1 Name of the Entrepreneur : xxxxxxxxxx
- 2 Constitution (legal Status) : xxxxxxxxxx
- 3 Father / Spouse Name : xxxxxxxxxxxxxx
- 4 Unit Address : xxxxxxxxxxxxxxxxxxxxxxxxxx
- District : xxxxxxxx
Pin: xxxxxxxx State: xxxxxxxxxx
Mobile xxxxxxxx
- 5 Product and By Product : **Fruit Vinegar**
- 6 Name of the project / business activity proposed : **Fruit Vinegar Manufacturing Unit**
- 7 Cost of Project : Rs.15.55 Lakhs
- 8 Means of Finance
Term Loan Rs.11 Lakhs
Own Capital Rs.1.56 Lakhs
Working Capital Rs.3 Lakhs
- 9 Debt Service Coverage Ratio : 2.92
- 10 Pay Back Period : 5 Years
- 11 Project Implementation Period : 5-6 Months
- 12 Break Even Point : 45%
- 13 Employment : 11 Persons
- 14 Power Requirement : 30 HP
- 15 Major Raw materials :
pineapple, apple, grape, orange, banana, Alcohol, Acetose etc
- 16 Estimated Annual Sales Turnover (Max Utilized Capacity) : 80.79 Lakhs
- 17 Detailed Cost of Project & Means of Finance

COST OF PROJECT

(Rs. In Lakhs)

| Particulars | Amount |
|---------------------------|--------------|
| Land | Own/Rented |
| Building /Shed 1500 Sq ft | Own/Rented |
| Plant & Machinery | 11.00 |
| Furniture & Fixtures | 1.22 |
| Working Capital | 3.33 |
| Total | 15.55 |

MEANS OF FINANCE

| Particulars | Amount |
|------------------|--------------|
| Own Contribution | 1.56 |
| Term Loan | 11.00 |
| Working Capital | 3.00 |
| Total | 15.55 |

Project Report on Fruit Vinegar



Product and its Applications

Vinegar is a natural product derived from alcoholic and acetous fermentation of a suitable medium such as fruits, malt, molasses, sugarcane juice etc. Vinegar is known to have various applications in homes, restaurants and in the food industries. It is used in pickle, chutney, tomato ketchup, sauces and various other condiment preparations. Vinegar aids digestion and improves the quality of cooked meat and fish. Vinegar should contain at least 3.75 g of acetic acid per 100 mL and also contain at least 1.5% w/v of total solids and 0.18% total ash.

Market Potential

Vinegar is largely produced in the cottage scale or in traditional sectors. Presently synthetic vinegar is also being produced. Natural fruit vinegar is nutritive, appealing and has a huge market demand.

Basis and Presumption

- The unit proposes to work at least 300 days per annum on single shift basis.
- The wages for skilled workers is taken as per prevailing rates in this type of industry.
- Interest rate for total capital investment is calculated @ 11% per annum.
- The entrepreneur is expected to raise 10% of the capital as margin money.
- The unit proposes to construct own building as per FSSAI. specifications.
- Costs of machinery and equipment are based on average prices enquired from machinery manufacturers.

Implementation schedule

Project implementation will take a period of 6-8 months. Break-up of the activities and relative time for each activity is shown below:

| | |
|--|------------|
| Scheme preparation and approval | 01 month |
| License and registrations | 1-2 months |
| Sanction of financial supports etc | 2-5 months |
| Installation of machinery and power connection | 6-8 months |
| Trial run and production | 01 month |

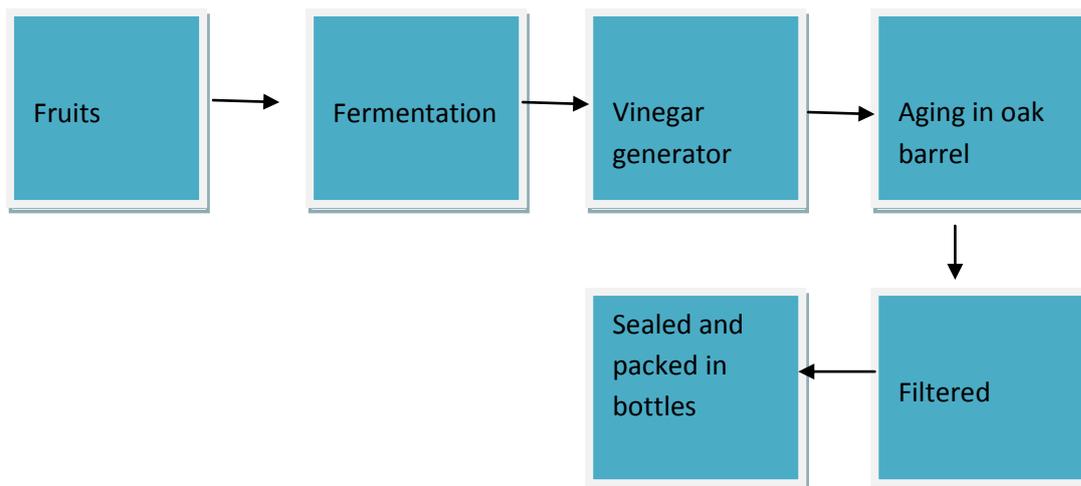
Technical aspects

Location

The plant can be located at any suitable place keeping in view the marketing convenience, availability of raw material, power, water and skilled manpower.

Process of Manufacture

Fruit vinegar is made from fruits e.g. pineapple, apple, grape, orange, banana, peach, apricot as well as sugarcane juice, coconut water, malt, molasses. The juice/ aqueous extract is fermented with *Saccharomyces cerevisiae* yeast after adjusting sugar concentration. The fermented alcoholic liquor is passed through vinegar generator for acetic acid fermentation using *acetobactor* culture. It takes nearly 15 days for completion of fermentation process. Vinegar contains about 4% acetic acid. The brewed vinegar is aged in plain oak barrels for at least 6 months to improve the flavour and bouquet. The final product is filtered, packed in bottles and sealed.



PROJECTED BALANCE SHEET

| PARTICULARS | I | II | III | IV | V |
|-----------------------------------|--------------|--------------|--------------|--------------|--------------|
| <u>SOURCES OF FUND</u> | | | | | |
| Capital Account | | | | | |
| Opening Balance | - | 1.70 | 4.61 | 7.13 | 8.41 |
| Add: Additions | 1.56 | - | - | - | - |
| Add: Net Profit | 2.14 | 4.41 | 6.52 | 8.28 | 10.87 |
| Less: Drawings | 2.00 | 1.50 | 4.00 | 7.00 | 10.00 |
| Closing Balance | 1.70 | 4.61 | 7.13 | 8.41 | 9.28 |
| CC Limit | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 |
| Term Loan | 9.78 | 7.33 | 4.89 | 2.44 | - |
| Sundry Creditors | 0.37 | 0.43 | 0.48 | 0.54 | 0.61 |
| TOTAL : | 14.84 | 15.36 | 15.50 | 14.39 | 12.88 |
| <u>APPLICATION OF FUND</u> | | | | | |
| Fixed Assets (Gross) | 12.22 | 12.22 | 12.22 | 12.22 | 12.22 |
| Gross Dep. | 1.77 | 3.28 | 4.58 | 5.68 | 6.62 |
| Net Fixed Assets | 10.45 | 8.94 | 7.64 | 6.54 | 5.60 |
| Current Assets | | | | | |
| Sundry Debtors | 1.62 | 1.89 | 2.14 | 2.35 | 2.69 |
| Stock in Hand | 2.18 | 2.33 | 2.53 | 3.88 | 4.11 |
| Cash and Bank | 0.60 | 2.20 | 3.18 | 1.62 | 0.48 |
| TOTAL : | 14.84 | 15.36 | 15.50 | 14.39 | 12.88 |
| | - | - | - | - | - |

PROJECTED PROFITABILITY STATEMENT

| PARTICULARS | I | II | III | IV | V |
|---------------------------------|---------------|---------------|---------------|---------------|---------------|
| <u>A) SALES</u> | | | | | |
| Gross Sale | 48.46 | 56.70 | 64.12 | 70.53 | 80.79 |
| Total (A) | 48.46 | 56.70 | 64.12 | 70.53 | 80.79 |
| <u>B) COST OF SALES</u> | | | | | |
| Raw Mateiral Consumed | 22.43 | 25.51 | 28.84 | 32.45 | 36.34 |
| Electricity Expenses | 2.96 | 3.20 | 3.45 | 3.69 | 3.94 |
| Repair & Maintenance | 0.24 | 0.28 | 0.32 | 0.35 | 0.40 |
| Labour & Wages | 10.76 | 11.83 | 13.02 | 14.32 | 15.75 |
| Depreciation | 1.77 | 1.51 | 1.29 | 1.10 | 0.94 |
| Cost of Production | 38.15 | 42.34 | 46.92 | 51.92 | 57.38 |
| Add: Opening Stock /WIP | - | 1.06 | 1.06 | 1.09 | 2.26 |
| Less: Closing Stock /WIP | 1.06 | 1.06 | 1.09 | 2.26 | 2.30 |
| Cost of Sales (B) | 37.09 | 42.34 | 46.89 | 50.75 | 57.34 |
| C) GROSS PROFIT (A-B) | 11.37 | 14.36 | 17.23 | 19.78 | 23.45 |
| | 23.46% | 25.32% | 26.87% | 28.04% | 29.02% |
| D) Bank Interest (Term Loan) | 1.19 | 0.97 | 0.71 | 0.44 | 0.17 |
| ii) Interest On Working Capital | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 |
| E) Salary to Staff | 5.28 | 5.81 | 6.39 | 7.03 | 7.73 |
| F) Selling & Adm Expenses Exp. | 2.42 | 2.84 | 3.21 | 3.53 | 4.04 |
| TOTAL (D+E) | 9.23 | 9.95 | 10.63 | 11.32 | 12.27 |
| H) NET PROFIT | 2.14 | 4.41 | 6.60 | 8.46 | 11.18 |
| | 4.4% | 7.8% | 10.3% | 12.0% | 13.8% |
| I) Taxation | - | - | 0.08 | 0.17 | 0.31 |
| J) PROFIT (After Tax) | 2.14 | 4.41 | 6.52 | 8.28 | 10.87 |

PROJECTED CASH FLOW STATEMENT

| PARTICULARS | I | II | III | IV | V |
|-----------------------------------|--------------|-------------|-------------|--------------|--------------|
| <u>SOURCES OF FUND</u> | | | | | |
| Own Contribution | 1.56 | - | | | |
| Net Profit | 2.14 | 4.41 | 6.60 | 8.46 | 11.18 |
| Depreciation & Exp. W/off | 1.77 | 1.51 | 1.29 | 1.10 | 0.94 |
| Increase In Cash Credit | 3.00 | | | | |
| Increase In Term Loan | 11.00 | - | - | - | - |
| Increase in Creditors | 0.37 | 0.05 | 0.06 | 0.06 | 0.06 |
| TOTAL : | 19.84 | 5.98 | 7.95 | 9.62 | 12.18 |
| <u>APPLICATION OF FUND</u> | | | | | |
| Increase in Fixed Assets | 12.22 | - | - | - | - |
| Increase in Stock | 2.18 | 0.15 | 0.20 | 1.35 | 0.23 |
| Increase in Debtors | 1.62 | 0.27 | 0.25 | 0.21 | 0.34 |
| Repayment of Term Loan | 1.22 | 2.44 | 2.44 | 2.44 | 2.44 |
| Taxation | - | - | 0.08 | 0.17 | 0.31 |
| Drawings | 2.00 | 1.50 | 4.00 | 7.00 | 10.00 |
| TOTAL : | 19.24 | 4.37 | 6.97 | 11.18 | 13.33 |
| Opening Cash & Bank Balance | - | 0.60 | 2.20 | 3.18 | 1.62 |
| Add : Surplus/(Deficit) | 0.60 | 1.60 | 0.98 | - 1.56 | - 1.14 |
| Closing Cash & Bank Balance | 0.60 | 2.20 | 3.18 | 1.62 | 0.48 |

COMPUTATION OF FRUIT VINEGAR MANUFACTURING UNIT**Items to be Manufactured Fruit Vinegar**

| | | | |
|--------------------------------|--|----------------------|---------------|
| Manufacturing Capacity per Day | | 0.20 | MT |
| No. of Working Hour | | 8 | |
| No of Working Days per month | | 25 | |
| No. of Working Day per annum | | 300 | |
| Total Production per Annum | | 60 | MT |
| Year | | Capacity Utilisation | Fruit Vinegar |
| I | | 60% | 36 |
| II | | 65% | 39 |
| III | | 70% | 42 |
| IV | | 75% | 45 |
| V | | 80% | 48 |

COMPUTATION OF RAW MATERIAL

| Item Name | Quantity of Raw Material | Unit | Unit Rate of | Total Cost Per Annum (100%) |
|---------------------------------|--------------------------|------|--------------|-----------------------------|
| Fruits | 140.00 | MT | 20,000.00 | 2,800,000.00 |
| Glass bottles & caps | 85,000 | Nos | 6.00 | 510,000.00 |
| Labels | 85,000 | kgs | 1.50 | 127,500.00 |
| Chemicals, cobs, sugar, culture | l.s | | | 150,000.00 |
| Lab consumables, misc. | l.s | | | 150,000.00 |
| Total | 85,140.00 | | | 3,737,500.00 |

Total Raw material in Rs lacs at 100% Capacity 37.38
 Cost per MT (In Rs) **62,291.70**

| Raw Material Consumed | Capacity Utilisation | Rate | Amount (Rs.) |
|-----------------------|----------------------|-----------|--------------|
| I | 60% | 62,291.70 | 22.43 |
| II | 65% | 65,406.30 | 25.51 |
| III | 70% | 68,676.60 | 28.84 |
| IV | 75% | 72,110.40 | 32.45 |
| V | 80% | 75,715.90 | 36.34 |

COMPUTATION OF CLOSING STOCK & WORKING CAPITAL

| PARTICULARS | I | II | III | IV | V |
|-----------------------|-------------|-------------|-------------|-------------|-------------|
| | | | | | |
| | | | | | |
| Finished Goods | | | | | |
| (10 Days requirement) | 1.06 | 1.06 | 1.09 | 2.26 | 2.30 |
| Raw Material | | | | | |
| (15 Days requirement) | 1.12 | 1.28 | 1.44 | 1.62 | 1.82 |
| | | | | | |
| | | | | | |
| Closing Stock | 2.18 | 2.33 | 2.53 | 3.88 | 4.11 |

COMPUTATION OF WORKING CAPITAL REQUIREMENT

| Particulars | Amount | Margin(10%) | Net Amount |
|------------------------------------|---------------|--------------------|-----------------------|
| Stock in Hand | 2.18 | | |
| Less: | | | |
| Sundry Creditors | 0.37 | | |
| Paid Stock | 1.81 | 0.18 | 1.63 |
| | | | |
| Sundry Debtors | 1.62 | 0.16 | 1.45 |
| Working Capital Requirement | | | 3.08 |
| | | | |
| Margin | | | 0.34 |
| | | | |
| MPBF | | | 3.08 |
| Working Capital Demand | | | 3.00 |

BREAK UP OF LABOUR

| Particulars | Wages | No of | Total |
|--|-----------|-----------|-----------|
| | Per Month | Employees | Salary |
| Supervisor | 20,000.00 | 1 | 20,000.00 |
| Plant Operator | 15,000.00 | 1 | 15,000.00 |
| Unskilled Worker | 8,500.00 | 4 | 34,000.00 |
| Helper | 5,000.00 | 1 | 5,000.00 |
| Security Guard | 7,500.00 | 1 | 7,500.00 |
| | | | 81,500.00 |
| Add: 10% Fringe Benefit | | | 8,150.00 |
| Total Labour Cost Per Month | | | 89,650.00 |
| Total Labour Cost for the year (In Rs. Lakhs) | | 8 | 10.76 |

BREAK UP OF SALARY

| Particulars | Salary | No of | Total |
|---|-----------|-----------|-----------|
| | Per Month | Employees | Salary |
| Accountant cum store keeper | 15,000.00 | 1 | 15,000.00 |
| Administrative Staffs | 12,500.00 | 2 | 25,000.00 |
| Total Salary Per Month | | | 40,000.00 |
| Add: 10% Fringe Benefit | | | 4,000.00 |
| Total Salary for the month | | | 44,000.00 |
| Total Salary for the year (In Rs. Lakhs) | | 3 | 5.28 |

COMPUTATION OF DEPRECIATION

| Description | Land | Building/shed | Plant & Machinery | Furniture | TOTAL |
|--------------------------------------|------|---------------|-------------------|---------------|-------|
| Rate of Depreciation | | | 15.00% | 10.00% | |
| Opening Balance | | Own/Rented | - | - | - |
| Addition | - | | 11.00 | 1.22 | 12.22 |
| | - | | 11.00 | 1.22 | 12.22 |
| TOTAL | | - | 11.00 | 1.22 | 12.22 |
| Less : Depreciation | - | - | 1.65 | 0.12 | 1.77 |
| WDV at end of 1st year | - | - | 9.35 | 1.10 | 10.45 |
| Additions During The Year | - | - | - | - | - |
| | - | - | 9.35 | 1.10 | 10.45 |
| Less : Depreciation | - | - | 1.40 | 0.11 | 1.51 |
| WDV at end of II nd Year | - | - | 7.95 | 0.99 | 8.94 |
| Additions During The Year | - | - | - | - | - |
| | - | - | 7.95 | 0.99 | 8.94 |
| Less : Depreciation | - | - | 1.19 | 0.10 | 1.29 |
| WDV at end of III rd year | - | - | 6.76 | 0.89 | 7.64 |
| Additions During The Year | - | - | - | - | - |
| | - | - | 6.76 | 0.89 | 7.64 |
| Less : Depreciation | - | - | 1.01 | 0.09 | 1.10 |
| WDV at end of IV year | - | - | 5.74 | 0.80 | 6.54 |
| Additions During The Year | - | - | - | - | - |
| | - | - | 5.74 | 0.80 | 6.54 |
| Less : Depreciation | - | - | 0.86 | 0.08 | 0.94 |
| WDV at end of V th year | - | - | 4.88 | 0.72 | 5.60 |

REPAYMENT SCHEDULE OF TERM LOAN

11.0%

| Year | Particulars | Amount | Addition | Total | Interest | Repayment | CI Balance |
|------|-----------------|--------|----------|-------|----------|-----------|------------|
| I | Opening Balance | | | | | | |
| | Ist Quarter | - | 11.00 | 11.00 | 0.30 | - | 11.00 |
| | IInd Quarter | 11.00 | - | 11.00 | 0.30 | - | 11.00 |
| | IIIrd Quarter | 11.00 | - | 11.00 | 0.30 | 0.61 | 10.39 |
| | Ivth Quarter | 10.39 | - | 10.39 | 0.29 | 0.61 | 9.78 |
| | | | | | 1.19 | 1.22 | |
| II | Opening Balance | | | | | | |
| | Ist Quarter | 9.78 | - | 9.78 | 0.27 | 0.61 | 9.17 |
| | IInd Quarter | 9.17 | - | 9.17 | 0.25 | 0.61 | 8.55 |
| | IIIrd Quarter | 8.55 | - | 8.55 | 0.24 | 0.61 | 7.94 |
| | Ivth Quarter | 7.94 | | 7.94 | 0.22 | 0.61 | 7.33 |
| | | | | | 0.97 | 2.44 | |
| III | Opening Balance | | | | | | |
| | Ist Quarter | 7.33 | - | 7.33 | 0.20 | 0.61 | 6.72 |
| | IInd Quarter | 6.72 | - | 6.72 | 0.18 | 0.61 | 6.11 |
| | IIIrd Quarter | 6.11 | - | 6.11 | 0.17 | 0.61 | 5.50 |
| | Ivth Quarter | 5.50 | | 5.50 | 0.15 | 0.61 | 4.89 |
| | | | | | 0.71 | 2.44 | |
| IV | Opening Balance | | | | | | |
| | Ist Quarter | 4.89 | - | 4.89 | 0.13 | 0.61 | 4.28 |
| | IInd Quarter | 4.28 | - | 4.28 | 0.12 | 0.61 | 3.67 |
| | IIIrd Quarter | 3.67 | - | 3.67 | 0.10 | 0.61 | 3.06 |
| | Ivth Quarter | 3.06 | | 3.06 | 0.08 | 0.61 | 2.44 |
| | | | | | 0.44 | 2.44 | |
| V | Opening Balance | | | | | | |
| | Ist Quarter | 2.44 | - | 2.44 | 0.07 | 0.61 | 1.83 |
| | IInd Quarter | 1.83 | - | 1.83 | 0.05 | 0.61 | 1.22 |
| | IIIrd Quarter | 1.22 | - | 1.22 | 0.03 | 0.61 | 0.61 |
| | Ivth Quarter | 0.61 | | 0.61 | 0.02 | 0.61 | 0.00 |
| | | | | | 0.17 | 2.44 | |

Door to Door Period 60 Months
Moratorium Period 6 Months
Repayment Period 54 Months

CALCULATION OF D.S.C.R

| PARTICULARS | I | II | III | IV | V |
|------------------------------------|-------------|-------------|-------------|-------------|-------------|
| | | | | | |
| | | | | | |
| <u>CASH ACCRUALS</u> | 3.91 | 5.92 | 7.81 | 9.39 | 11.81 |
| Interest on Term Loan | 1.19 | 0.97 | 0.71 | 0.44 | 0.17 |
| Total | 5.11 | 6.90 | 8.52 | 9.82 | 11.98 |
| | | | | | |
| <u>REPAYMENT</u> | | | | | |
| Repayment of Term Loan | 1.22 | 2.44 | 2.44 | 2.44 | 2.44 |
| Interest on Term Loan | 1.19 | 0.97 | 0.71 | 0.44 | 0.17 |
| Total | 2.41 | 3.42 | 3.15 | 2.88 | 2.61 |
| | | | | | |
| DEBT SERVICE COVERAGE RATIO | 2.12 | 2.02 | 2.70 | 3.41 | 4.59 |
| | | | | | |
| AVERAGE D.S.C.R. | | | 2.92 | | |

COMPUTATION OF SALE

| Particulars | I | II | III | IV | V |
|--------------------------------|--------------|--------------|--------------|--------------|--------------|
| Op Stock | - | 1.00 | 1.00 | 1.00 | 2.00 |
| Production | 36.00 | 39.00 | 42.00 | 45.00 | 48.00 |
| | 36.00 | 40.00 | 43.00 | 46.00 | 50.00 |
| Less : Closing Stock(10 Days) | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 |
| Net Sale MT | 35.00 | 39.00 | 42.00 | 44.00 | 48.00 |
| Fruit Vinegar (650 ml bottles) | 53,846.00 | 60,000.00 | 64,615.00 | 67,692.00 | 73,846.00 |
| Sale Price per Bottle | 90.00 | 94.50 | 99.23 | 104.19 | 109.40 |
| Sale (in Lacs) | 48.46 | 56.70 | 64.12 | 70.53 | 80.79 |
| | | | | | |
| | | | | | |

COMPUTATION OF ELECTRICITY

| (A) POWER CONNECTION | | | |
|------------------------------------|----------|-------------|---------------------|
| Total Working Hour per day | Hours | 8 | |
| Electric Load Required | HP | 30 | |
| Load Factor | | 0.7460 | |
| Electricity Charges | per unit | 7.50 | |
| Total Working Days | | 300 | |
| Electricity Charges | | | 4.03 |
| Add : Minimim Charges (@ 10%) | | | |
| | | | |
| | | | |
| (B) DG set | | | |
| No. of Working Days | | 300 | days |
| No of Working Hours | | 0.5 | Hour per day |
| Total no of Hour | | 150 | |
| Diesel Consumption per Hour | | 8 | |
| Total Consumption of Diesel | | 1,200 | |
| Cost of Diesel | | 65.00 | Rs. /Ltr |
| Total cost of Diesel | | 0.78 | |
| Add : Lube Cost @15% | | 0.12 | |
| Total | | 0.90 | |
| | | | |
| Total cost of Power & Fuel at 100% | | | 4.93 |
| Year | Capacity | | Amount (in Lacs) |
| I | 60% | | 2.96 |
| II | 65% | | 3.20 |
| III | 70% | | 3.45 |
| IV | 75% | | 3.69 |
| V | 80% | | 3.94 |

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