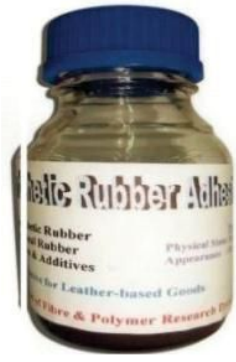
Synthetic Rubber Adhesive

Major Raw materials:

Adhesive grade Synthetic Rubber, Organic Solvents, Hardener, Antioxidants, tackifier, filler, plasticizer, curing agent, vulcanizing agent and sequestering agent.

Uses:

As an Adhesive for Leather-based goods, especially for joining parts of shoe soles and uppers, leather bags, moneybags, parses, leather jackets, etc.



Physical State: Highly Viscous Liquid.

Demand: 20,000 MTs/Year.

Salient Features:

- Very easy way for preparation of the solvent based adhesive involving simple stirring and mixing process.
- It doesn't require any mastication process or equipment.
- Low-cost available solvents were used to make it cheaper.
- Antioxidant was used for making stable and long-lasting product.
- It is a product of very high adhesive bond strength.

Reference:BCSIR

Urea Formaldehyde Resin

Major Raw Materials:

Urea, Formaldehyde and others.

Uses:

- Urea-formaldehyde resin is used by the industries which deal with forest products (ex. hard wood, plywood, particle board etc.) for a variety of purposes.
- It is also used as adhesive, coating etc.

Energy saving and low cost domestic oven
Industrial Physics Division

Product Name	 **Domestic Oven**
Major Raw Materials	Aluminum Sheet
Application	Without any extra fuel system, you can make your choice of **cakes, biscuits, pudding, bread, bunny, patties, roasted** and other delicious meals, in a healthier way. Uses of it are very safe and durable.
Usage	In the new condition, to remove the odor from the inside of the oven, put a small amount of gas stove in the lid, and cover the lid for 2 hours and take 1 hour of heat for the lid. You can control the heat by observing the oven with triangular hole. Do not raise the oven as soon as the blaze rings around the burner. It has been found that under this condition the temperature of 350-450 degrees Fahrenheit (175-232 degrees Celsius) is generated in the oven.
Advantages	A gas oven gives you greater control over your cooking temperature. Warm-up time is less with gas. Once you turn off the oven, cooking stops almost immediately. The instant on-off feature with gas cooking gives you complete freedom in good cooking. With electricity you need to allow some time for the oven to cool down. Some dishes may be affected by the prolonged high temperatures. Natural gas also cooks food more evenly than electricity. Gas ovens will give you better results in cooking.
Patent Details	**Bangladesh Patent No. 1002228(1989)**
Commercialization Status	Ready for Commercialization
Precaution	To make any type of food it is necessary to keep the ignition of the stove gentle. If heat becomes high the food can be burnt and the oven is likely to be damaged. The oven lid should not be open until the food is ready. Use handle cloth while holding hot hen. Clean the inside of the oven sometimes.
Techno-Economics	Available on demand
Ecological/Environmental Impact	It has no adverse effect on the environment
Keywords	Domestic, Food, Natural

2. Production of Activated Carbon

Process	Activated Carbon
Area	Adsorbent
Uses	Purification of Water, Cosmetics, medicine, gas purification, air filtration for mask
Salient Features	• Treatment of water • Treatment of sewage • Use in different cosmetics (lipstick, cleanser) • Use in medicine
Scale of Development	Laboratory scale
Major Raw Materials	Pulp mill wastes liquor
Major Plant Equipment/ Machinery	Furnace, Chemical reactor
Details of Specific application	Purification of Water, Cosmetics, medicine, gas purification, air filtration for mask
Status of Development	Activated Carbon Prepared and tested
Ecological/Environmental impact (If any, specify briefly)	Prevent surface water pollution as used the pulp mill waste liquor for active carbon preparation. Make fresh and bad smell free environment
Patenting details	Not applied
Commercialization status	Ready for commercialization
Techno-Economics	Available in demand
Key words	Pulp mill liquor, lignin, Active Carbon

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3. Preparation of lignin based Resin

Process	Production of Resin from lignin (phenol formaldehyde)
Area	Plywood adhesives
Uses	Used as adhesives in plywood and particle board
Salient Features	Used as a glue for the preparation of • plywood • particle board
Scale of Development	Laboratory scale
Major Raw Materials	Lignin, Phenol and Formaldehyde
Major Plant Equipment/ Machinery	Reactor
Details of Specific application	Used as a glue for the preparation of plywood and particle board
Status of Development	Lignin extracted from different biomass and 50% phenol substituted by lignin and resin prepared
Patenting details	Not applied
Commercialization status	Ready for commercialization
Techno-Economics	Available in demand
Key words	Lignin, resin, plywood, additives, particle board

4. Preparation of Rayon grade pulp

Process	Rayon grade pulp from lignocelluloses
Area	Rayon
Uses	Production of rayon and different chemicals
Salient Features	• Preparation rayon • chemicals • drug excipient
Scale of Development	Laboratory scale
Major Raw Materials	Biomass, Lignocelluloses
Major Plant Equipment/ Machinery	Digester, screener
Details of Specific application	Preparation rayon, biofuel, biochemicals and biomaterial
Status of Development	Rayon grade pulp produced
Patenting details	applied
Commercialization status	Ready for commercialization
Techno-Economics	Available in demand
Key words	Biomass, dissolving pulp, rayon

Digital Water Bath

Uses	To incubate samples in water at a constant temperature over a long period of time.
Features	✦ Provide greater temperature uniformity, control and stability. Working temperature range from Room Temperature to 100 °C ✦ Four holes. ✦ Heater: 2 kW ✦ Temperature stability of ± 0.2 °C ✦ Capacity: 8 liters
Scale of Development	The product is standardized at Bench scale.
Major Raw Materials	Stainless steel sheet, Thermocouple, IC, Relay, Heater etc.
Major Plant Equipment	Lathe machine, Sheet cutter, Circuit board plotter.
Specific Application	❖ Typically used during incubation in microbiological laboratory work. ❖ Warming Reagents/ Routine Laboratory applications ❖ Bacteriological Examinations ❖ Cell cultivation
Status of Development	It is developed and tested.
Environmental impact	Process is environment friendly.
Commercialization Status	Ready for commercialization
Price (per Unit)	45,000/- (Forty five thousand taka only)
Key words	Water bath, temperature, heater, sample

Fruit-flavoured Salt for Gastric comfort

Process	: A process for production of fruit-flavoured salt which relieves discomforts due to food intake.
Area	: Gastric comfort, Relieves acidity.
Uses	: The granules according to the invention are especially advantageous in relieving gastric acidity instantly occurring due to food intake.
Salient Features	: The stomach naturally secretes acid that is essential to prevent bacterial growth and also to aid digestion of foods. When there is excess production of acid by the gastric glands of the stomach, it results in the condition known as acidity. Excessive acid in stomach may result from eating habits, fad diets, stress, smoking and alcohol consumption, lack of physical activity, irregularity in eating pattern etc. This may cause several discomforting situation like burning in the stomach and throat, restlessness, belching, nausea, sour taste, indigestion, constipation etc. The action of the acid neutralizing food supplements basically results in the increase of the stomach pH. Due to this increase in the pH value the symptoms typical of hyperacidity are reduced or even eliminated.
Scale of Development	: The process is standardized at bench scale.
Major Raw Materials	: Sodium Bicarbonate, Citric Acid, Tartaric Acid, Aspartame, Food Grade Color, Food Grade Essence.
Major Plant Equipment/Machinery	: Dryer, pH meter, Weighing machine, Moisture analyser.
Details of Specific Application	: The main object of the invention is to find out a suitable effervescent food supplement which can relieve the symptoms of occasional gastric acidity defined herein as sour stomach, upset stomach, acid indigestion, belching, abdominal pain, heartburn, bloating, gas etc. with a pleasant taste on ingestion.
Status of Development	: The product has been developed and leased out to the local entrepreneur “M/S Grand Consumer” of Pabna.
Ecological/Environmental Impact	: The developed process is environment friendly. All raw materials used in the process are nontoxic. None of the consumables or procedures has adverse impact on ecology or environment.
Commercialisation Status	: Leased out to M/S Grand Consumer, Village: Fakirpoor, Post office: Malanchi, Upazila: Pabna Sadar, District: Pabna.
Price	10/- per 5 gram
Key words	: Fruit-flavoured salt, Gastric comfort, Food intake.