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## P R E F A C E

With the advancement of science and technology the growth of chemical industries is only a thing of the recent past. These had been completely neglected in the pre-independence period as almost all such items were imported from Great Britain. But after independence of our country the Govt. felt their due need and set forth for its development in planned manner. The statistics of production capital in chemical industries employment, gross output and wage bill etc. show an ever increasing trend and its allocation in our plans outlay has increased many times.

Apart from the big chemical industries, the chemical industries on small scale play a vital role in the country's economy. Moreover traditional consumer goods no longer catch the market. The use of synthetic products in every aspect of life is rapidly increasing. Keeping in view the requirements of an average man only those items have been selected for preparation which can be started on small scale. Information regarding the process of manufacture and the type of equipment required for setting up the small unit is included.

The preparation of chemically pure substances, their standardisation, preparation of extra chemicals, analytical reagents, certain toilet preparations, dressing materials for surgical use, antiseptics, pharmaceutical preparation and certain drugs involve such processing as repeated crystallisation to attain high state of purity, distillation or repeated washing to remove impurities etc. On account of the delicate nature of these processes and the high cost of the finished materials and also the nature of these chemicals, it will be observed that a good number of industries can be started on small scale economically. In fact in most of these cases laboratory remains the factory.

It is hoped that the information given in this book will prove useful for the development of the small and cottage scale chemical industries in the country.

Any constructive suggestion for the improvement of the book is cordially invited from the readers.

**Madan Lal**

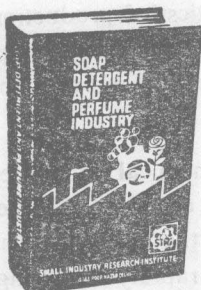
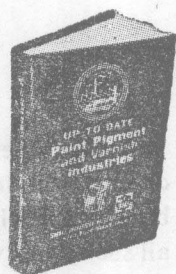


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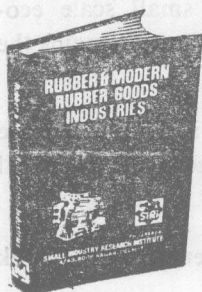
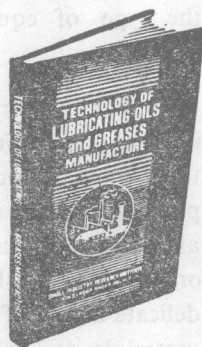
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dust	(SIRI/191)	phosphate	(SIRI/701)
Nickel sulphate	(SIRI/807)	Sofening of mica	(SIRI/728)
Oxygen gas plant	(SIRI/882)	Stable bleaching powder	(SIRI/477)
Partially calcined		Sulphates of zinc copper	
dolomite	(SIRI/748)	and aluminium	(SIRI/062)
Photographic chemicals	(SIRI/423)	Sabilizer for ice cream	(SIRI/542)
Plaster of paris	(SIRI/344)	Sulphuric acid	(SIRI/294)
Pigment paste for		Sulphur crystals uses &	
textiles	(SIRI/789)	list of consumers	(SIRI/976)
Phosphoric acid from		Stannous chloride	(SIRI/133)
animal bones	(SIRI/281)	Titanium dioxide	(SIRI/864)
Phosphoric acid from		Trisodium phosphate	(SIRI/050)
rock phosphate	(SIRI/261)	Vanadium penta oxide	(SIRI/916)
Potassium chloride	(SIRI/055)	Zinc oxide	(SIRI/054)
Potassium nitrite	(SIRI/878)	Zinc sulphate	(SIRI/053)
Potassium silicate	(SIRI/876)		

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## Organic Chemical Industries

Absolute and power alcohol	(SIRI/858)	Diethyl phthalate	(SIRI/796)
Acentanilide	(SIRI/1017)	Dioctyl phthalate	(SIRI/678)
Acetone	(SIRI/886)	Dichloroxy metaxy lenol	(SIRI/553)
Advice for suitable stabilizer for damp	(SIRI/542)	Emulsion & Solution Polymerisation of	
2-Amino-4-chloro-6-methyl-pyrimidine	(SIRI/889)	M.M. Monomer	(SIRI/918)
Aniline	(SIRI/1018)	Dichloro phenoxy acetic acid	(SIRI/469)
Anthracene	(SIRI/401)	Ester gum	(SIRI/083)
Benzaldehyde	(SIRI/146)	Ethyl acetate	(SIRI/446)
Benzene hexachloride (BHC)	(SIRI/092)	Ethyl alcohol from molasses	(SIRI/145)
Benzyl benzoate	(SIRI/121)	Ethylaniline	(SIRI/926)
Beta ionone	(SIRI/698)	Ethyl chloride	(SIRI/975)
Blowing agent	(SIRI/013)	Ethyl ether	(SIRI/607)
Butane gas	(SIRI/317)	Ethyl vanillin	(SIRI/449)
CMC powder	(SIRI/442)	Formic acid	(SIRI/529)
Camphor manufacture	(SIRI/043)	Furfural	(SIRI/1010)
Caprolactum	(SIRI/289)	Gammexane	(SIRI/703)
Cardanol	(SIRI/880)	Geraniol citronellol Hydroxy	(SIRI/183)
Cardanol from cashewnut shell liquid	(SIRI/890)	Glacial acetic acid citronellol	(SIRI/609)
Caffeine from tea waste	(SIRI/156)	Glucose	(SIRI/612)
Charcoal by destructive distillation	(SIRI/834)	Glycerine	(SIRI/158)
Chloral hydrate	(SIRI/767)	Glue and gelatine	(SIRI/421)
2-chloro-6 (Trichloro-methyl)-pyridine	(SIRI/891)	Glue and gelatin (DPR)	(SIRI/361)
Chloro acetyl chloride	(SIRI/395)	Isolation of citral and ionones from lemon grass oil	(SIRI/770)
Citric acid	(SIRI/290)	Lactic acid	(SIRI/791)
Citric acid based industries	(SIRI/061)	Manufacture of 2-chloroethyl trimethyl ammonium chloride	(SIRI/516)
Citronellol (aldehyde)	(SIRI/253)	Menthol crystals	(SIRI/026)
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Colchine manufacture	(SIRI/354)	Metol	(SIRI/883)
Coumarin	(SIRI/1004)	Monochlorobenzene	(SIRI/669)
Dehydration of onion and its powder process	(SIRI/961)	Napthalene balls	(SIRI/300)
DEP	(SIRI/226)	Naphthalene sulphonic acid	(SIRI/920)
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D.D.T. powder	(SIRI/900)		
Dextrine from starch	(SIRI/685)		
Dibutyl phthalate	(SIRI/797)		

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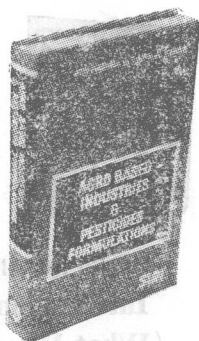


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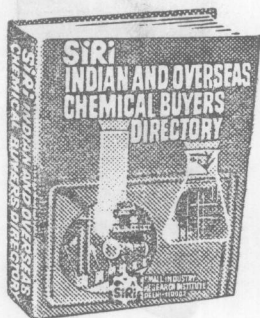
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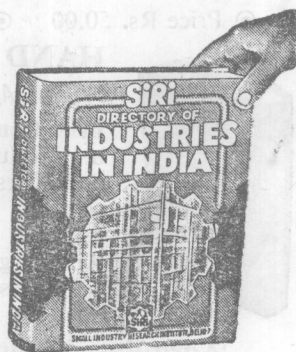
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