

Course Curricula

**Under
SKILL DEVELOPMENT INITIATIVE SCHEME (SDIS)**

Based on

Modular Employable Skills (MES)

Fragrance, Flavour & Perfume Sector

Designed in 2010

**Government of India
Ministry of Labour & Employment
Directorate General of Employment & Training**

List of members attended the Trade Committee Meeting for designing the course curriculum under **Skill Development Initiative Skill (SDIS)** based on **Modular Employable Skills (MES)** on **Fragrance, Flavour & Perfume Sector**
Held on 02.11.2010 at CSTARI, Kolkata-91.

Sl. No.	Name and Designation	Organisation	
1.	Mr. S.J.Amlan, Director	RDAT, Kolkata	Chairman
2.	Shri Anil Kumar, Jt. Director	CSTARI, Kolkata	Member
3.	Shri Shankar Chakraborty, Executive(Adv.)	Hindustan Unilever Ltd. Kolkata	Member
4.	Shri Tapan Kr. Das, Quality Control Officer	Bengal Chemicals & Pharmaceuticals Ltd., 164, M.M. Road, Kolkata-54	Member
5.	Shri Mehabub Rahaman, Asst. Professor	Jadavpur University, Kolkata	Member
6.	Shri Avijit Chetterjee, Asst. Quality Control Officer	Bengal Chemicals & Pharmaceuticals Ltd., B.T.Road, Panihati, Kolkata-114	Member
7.	Shri Mahebbor Rahaman, Chemist (Quality Assurance)	Greenco Biologicals Pvt. Ltd., GN-1, Sector-V, Salt Lake City, Kolkata-91	Member
8.	Shri Arun Kr. Das, Accts. Executive	Godrej Consumer Products Ltd.	Member
9.	Shri D. Mukherjee, Manager	Haldia Petrochemicals Ltd.	Member
10.	Shri Smarajit Das, Asst. Manager	Greater Calcutta Gas Supply Corp. Ltd., 14 Canal West Road, Kolkata-9	Member
11.	Dr. Soumen Basu, Dy. Director	Directorate of Industrial Training, West Bengal	Member
12.	Shri Rabin Debnath, Asst. Director	Directorate of Industrial Training, West Bengal	Member
13.	Shri M.C.Sharma, JDT.	CSTARI, Kolkata-91	Member
14.	Shri L.K.Mukherjee, DDT.	CSTARI, Kolkata-91	Member
15.	Shri S.B.Sardar, ADT.	CSTARI, Kolkata-91	Member
16.	Shri P.K.Dutta, ADT.	CSTARI, Kolkata-91	Member
17.	Shri R.N.Manna, T.O.	CSTARI, Kolkata-91	Member

**Course Curricula under Skill Development Initiative Scheme (SDIS)
Based on Modular Employable Skills (MES)
On “Fragrance, Flavour & Perfume” Sector**

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Skill Development based on Modular Employable Skills (MES)

Background

The need for giving emphasis on Skill Development, especially for the educated unemployed youth (both for rural & urban) has been highlighted in various forums. Unfortunately, our country's current education system does not give any emphasis on development of skills. As a result, most of the educated/uneducated unemployed youths are found wanting in this area, which is becoming their Achilles heel.

As India is on the path of economic development and the share of service sector's contribution to the GDP of the country is increasing (54% of GDP) it is becoming imperative that Government of India along with other nodal agencies play an important role in providing employable skills, with special emphasis on Skills.

Hence, need of the hour is some policy change at Apex level which will address the needs of the changing economy and look at providing mandatory skills training to all educated unemployed youths, with a view to have them gainfully employed. This shift in policy will ultimately benefit all the stake holders, namely the individuals, industry, Government and the economy by way of providing employment, increasing the output/productivity and ultimately resulting in a higher GDP for the nation.

Frame work for skill development based on 'Modular Employable Skills (MES)'

Very few opportunities for skill development are available for the above referred groups (educated unemployed youth). Most of the existing skill development programmes are long term in nature. Poor and less educated persons cannot afford long term training programmes due to higher entry qualifications, opportunity cost, etc. Therefore, a new framework for skill development has been evolved by the DGET to address the employability issues.

The **key features of new framework for skill development** are:-

- Demand driven short term training courses based on modular employable skills decided in consultation with Industries.
- Flexible delivery mechanism (part time, week ends, full time)
- Different levels of programmes (foundation level as well as skill up gradation) to meet demands of various target groups
- Central Government will facilitate and promote training while vocational training providers (VTP) under the Govt. and Private Sector will provide training.
- Optimum utilization of existing infrastructure to make training cost effective.
- Testing of skills of trainees by independent assessing bodies who would not be involved in conduct of the training programme, to ensure that it is done impartially.
- Testing & certification of prior learning (skills of persons acquired informally)

The Short Term courses would be based on "Modular Employable Skills (MES)".

The **concept for the MES** is:

- ✓ Identification of minimum skills set. Which is sufficient to get an employment in the Labour market.
- ✓ It allows skills upgradation, multi skilling, multi entry and exit, vertical mobility and life long learning opportunities in a flexible manner.
- ✓ It also allows recognition of prior learning (certification of skills acquired informally) effectively.

- ✓ The modules in a sector when grouped together could lead to a qualification equivalent to National Trade Certificate or higher.
- ✓ Courses could be available from level 1 to level 3 in different vocations depending upon the need of the employer organisations.
- ✓ MES would benefit different target groups like:
 - Workers seeking certification of their skills acquired informally
 - Workers seeking skill upgradation
 - Early school drop-outs and unemployed
 - Previously child Labour and their family

INTRODUCTION

Economic growth in India is increasingly supported by robust industrial growth. Fragrance, Flavour & Perfume Sector is one of the relatively lesser known but significant sectors that support almost all industrial activities. However, notwithstanding its importance and size (INR 4 trillion), it has traditionally not been accorded the attention it deserves as a separate sector in itself. The level of inefficiency in Fragrance, Flavour & Perfume Product activities in the country has been very high across all modes.

The required pace of efficiency and quality improvement will demand rapid development of capabilities of Fragrance, Flavour & Perfume Product service providers. And with these Products being a service oriented sector, skill development will emerge as a key capability.

This lack of focus on developing manpower and skills for the sector has resulted in a significant gap in the numbers and quality of manpower in the Fragrance, Flavour & Perfume sector.

This gap, unless addressed urgently, is likely to be a key impediment in the growth of the Fragrance, Flavour & Perfume Product sector in India and in consequence, could impact growth in industry and manufacturing sectors as well.

This underscores the need identifying areas where such manpower and skill gaps are critical, and developing focused action plans to improve the situation.

A look at the required initiatives for manpower development in the sector makes it clear that sustainable development of the sector's manpower requires a collaborative public private effort. The level of commitment demonstrated by each stakeholder would largely determine the direction that the sector heads towards.

Age of participants

The minimum age limit for persons to take part in the scheme is 15 years but there is no upper age limit.

Curriculum Development Process

Following procedure is used for developing course curricula

- Identification of Employable Skills set in a sector based on division of work in the Labour market.
- Development of training modules corresponding to skills set identified so as to provide training for specific & fit for purpose

- Development of detailed curriculum and vetting by a trade committee and by the NCVT

(Close involvement of Employers Organizations, State Governments and experts, vocational Training providers and other stakeholders are ensured at each stage).

Development of Core Competencies

Possession of proper attitudes is one of the most important attributes of a competent person. Without proper attitudes, the performance of a person gets adversely affected. Hence, systematic efforts will be made to develop attitudes during the training programme.

The trainees deal with men, materials and machines. They handle sophisticated tools and instruments. Positive attitudes have to be developed in the trainees by properly guiding them and setting up examples of good attitudes by demonstrated behaviors and by the environment provided during training.

Some important core competencies to be developed are:

1. Communication skills
2. Better usage of Vernacular/Local Language
3. Presentation skills
4. Self management
5. Resume preparation
6. GD participation/facing techniques
7. Interview facing techniques

Following competencies should also be developed:

1. Ability for planning, organizing and coordinating
2. Creative thinking, problem solving and decision-making
3. Leadership
4. Ability to bear stress
5. Negotiation

Duration of the Programmes

Time taken to gain the qualification will vary according to the pathway taken and will be kept very flexible for persons with different backgrounds and experience. Duration has been prescribed in hours in the curriculum of individual module, which are based on the content and requirements of a MES Module. However, some persons may take more time than the prescribed time. They should be provided reasonable time to complete the course.

Pathways to acquire Qualification:

Access to the qualification could be through:

- ✧ An approved training Programme.

Methodology

The training methods to be used should be appropriate to the development of competencies. The focus of the programme is on “performing” and not on “Knowing”. Lecturing will be restricted to the minimum necessary and emphasis to be given for learning through active participation and involvement.

The training methods will be individual centered to make each person a competent one. Opportunities for individual work will be provided. The learning process will be continuously monitored and feedback will be provided on individual basis.

Demonstrations using different models, audio visual aids and equipment will be used intensively.

Instructional Media Packages

In order to maintain quality of training uniformly all over the country, instructional media packages (Imps) will be developed by the National Instructional Media Institute (NIMI), Chennai.

Assessment

DGE&T will appoint assessing bodies to assess the competencies of the trained persons. The assessing body will be an independent agency, which will not be involved in conducting the training programme. This, in turn, will ensure quality of training and credibility of the scheme. Keeping in view, the target of providing training/testing of one million persons through out the country and to avoid monopoly, more than one assessing bodies will be appointed for a sector or an area.

Certificate

Successful persons will be awarded competency-based certificates issued by **National Council for Vocational Training (NCVT)**.

COURSE MATRIX

Fragrance, Flavour & Perfume Sector

LEVEL-II

Module No. - 01

Processing Assistant

LEVEL-I

Module No. - 07

Aroma Chemical Assistant

Module No. - 06

Solvent Extraction Operator

Module No. - 05

Fractional Distillation operator

Module No. - 04

Distillation Unit Operator

Module No. - 03

Perfume tester

Module No. - 02

Perfumer

Module No. - 01

Perfume Blender

LEVEL-I

MODULE –1

Name : Perfume Blender

Sector : Fragrance, Flavour & Perfume.

Code No. : FFP 101

Entry Qualification & Age : Minimum 5th standard & 14 years of age

Terminal Competency : After completion of training the candidate will be able to blend different type of perfumes.

Duration : 240 hours

Contents:-

SL. NO	Practical	Theory
1	Practice on general safety, health & hygiene and first aid. Safety aspects related to the trades.	General awareness on safety, health and first aid. Knowledge on related safety aspects related to the trades and remedies from accident.
2	Identification of different types of raw materials and its utilities.	Knowledge about perfumery. Fundamentals of essential oil, fragrance & flavour, natural raw materials and synthetic raw materials and its utilities.
3	Procurement as per classification of raw materials on the basis of odour/specification	Knowledge about raw materials on the basis of odour/specification.
4	Procurement as per classification of raw materials on the basis of volatility/specification.	Knowledge about raw materials on the basis of volatility/specification.
5	Handling of raw materials	Information for material handling.
6	Practice on blending following working methodology and steps.	Knowledge about blending.
7	Demonstration on blending unit.	Working principle of blending unit.
8	Packing of material, handling & storing.	Knowledge about packing and its methods.
9	Practice on labeling	Knowledge about labeling
10	General washing and cleaning of blending tank and weighing machine.	Knowledge about cleaning of blending tank and weighing machine

Tools & Equipments are required for 20 nos of Trainees in a batch.

SL.NO.	Description of Tools	Quantity
1	Blending Tank	2 nos
2	Weighing Balance	2 nos
3	Stainless Steel Jar	4 nos
4	Aluminum Bottles	10 nos
5	Oven	2 no
6	Beakers & Stirrer	10 nos each

LEVEL-I
MODULE –2

Name : Perfumer

Sector : Fragrance, Flavour & Perfume.

Code No. : FFP 102

Entry Qualification & Age : Minimum 5th standard & 14 years of age

Terminal Competency : After completion of training, the candidate will be able to blend and produce different types of perfumes and flavours.

Duration : 240 hours

Contents

SL.NO	PRACTICAL	THEORY
1	Practice on general safety, health & hygiene and first aid. Safety aspects related to the trades.	General awareness on safety, health and first aid. Knowledge on related safety aspects related to the trades and remedies from accident.
2	Identification of different types of raw materials and its utilities.	Knowledge about perfumery. Fundamentals of essential oil, fragrance & flavour, natural raw materials and synthetic raw materials and its utilities
3	Procurement as per classification of raw materials on the basis of odour and taste.	Knowledge about raw materials on the basis of odour and taste.
4	Procurement as per classification of raw materials on the basis of volatility.	Knowledge about raw materials on the basis of volatility.
5	Collection of materials & Procedure of handling.	Collection of information for material handling.
6	Practice on solvent extraction following working methods.	Knowledge about solvent and its extraction.
7	Demonstration and working of solvent extraction unit.	Working principle of solvent extraction unit.
8	Practice of packaging of material and its handling.	Knowledge about packing and its methods.
9	Application of solvents.	Knowledge about solvents and its use.
10	Application of concrete, absolutes and resinoids and its odour.	Knowledge about absolutes and resinoids and its odour.
11	Practice on Labeling.	Knowledge about labeling
12	General washing and cleaning of blending tank and weighing machine.	Knowledge about cleaning of blending tank and weighing machine

Tools & Equipments are required for 20 nos of Trainees in a batch.

SL.NO.	Description of Tools	Quantity
1	Blending Tank	2 nos
2	Weighing Balance	2 no
3	Stainless Steel Jar	4 nos
4	Aluminum Bottles	10 nos
5	Oven	2 no
6	Beakers & Stirrer	10 nos each

LEVEL-I

MODULE –3

Name : **Perfume Tester**

Sector : **Fragrance, Flavour & Perfume.**

Code No. : **FFP 103**

Entry Qualification & Age : Minimum 5th standard & 14 years of age

Terminal Competency : After completion of training, the candidate will be able to test and assess the quality of Fragrance, Flavour & Perfume.

Duration : 300 hours

Contents

SL.NO	PRACTICAL	THEORY
1	Practice on general safety, health & hygiene and first aid. Safety aspects related to the trades.	General awareness on safety, health and first aid. Knowledge on related safety aspects related to the trades and remedies from accident.
2	Identification of different types of raw materials and its utilities.	Knowledge about perfumery. Fundamentals of essential oil, fragrance & flavour, natural raw materials and synthetic raw materials and its utilities
3	Procurement as per classification of raw materials on the basis of odour and taste.	Knowledge about raw materials on the basis of odour and taste.
4	Procurement as per classification of raw materials on the basis of volatility.	Knowledge about raw materials on the basis of volatility.
5	Test the perfume as per prescribed standard/parameters	Introduction of quality and its control techniques as per different parameters.
6	Demonstration on various equipments i.e. pycnometer, hygrometer, tintometer, TLC kit, hydrometer, UV spectrophotometer, rotary evaporator.	Knowledge about various equipments and its applications.
7	Practice on packing of material and handling & storing.	Knowledge about packing and its methods.
8	Practice on labeling.	Knowledge about labeling .
9	Practice on cleaning of glassware's etc.	Knowledge about different glassware's

Tools & Equipments are required for 20 nos of Trainees in a batch.

SL.NO.	Description of Tools	Quantity
1	Stainless Steel Jar	4 nos
2	Aluminum Bottles	10 nos
3	Oven	2 nos
4	Beakers	10 nos
5	Stirrer	10 nos
6	Electronics balance	1 no
7	Conical flasks	4 nos
8	Test tubes	10 nos
9	Funnels	10 nos
10	Measuring cylinders	4 nos
11	Pyknometer	2 nos
12	Separating funnels	4 nos
13	Thermometer	2 nos
14	Hygrometer	4 nos
15	Water bath	1 nos
16	Tintometer	1 no
17	Hydrometer	1 no
19	Water distillation assemble	1 no
20	Sand bath	1 no
21	Polarimeter	1 no
22	Refractometer	1 no
23	pH meter	1 no

Demonstration to be given in related Industries on the following equipments

1. Automatic titrator
2. TLC Kit
3. Refrigerated centrifuge
4. UV Spectrophotometer
5. Rotary evaporator
6. Flash Plant
7. Thermostat

LEVEL-I
MODULE –4

Name : **Distillation Unit Operator**

Sector : **Fragrance, Flavour & Perfume.**

Code No. : **FFP 104**

Entry Qualification & Age : Minimum 5th standard & 14 years of age

Terminal Competency : After completion of training, the candidate will be able to process essential oil by distillation method.

Duration : 240 hours

Contents

SL.NO	PRACTICAL	THEORY
1	Practice on general safety, health & hygiene and first aid. Safety aspects related to the trades.	General awareness on safety, health and first aid. Knowledge on related safety aspects related to the trades and remedies from accident.
2	Identification of different types of raw materials and its utilities.	Knowledge about perfumery. Fundamentals of essential oil, fragrance & flavour, natural raw materials and synthetic raw materials and its utilities
3	Procurement as per classification of raw materials on the basis of odour and taste.	Knowledge about raw materials on the basis of odour and taste.
4	Procurement as per classification of raw materials on the basis of volatility.	Knowledge about raw materials on the basis of volatility.
5	Practice on collection of materials & handling.	Information for material handling.
6	Demonstration on distillation & working methodology. Demonstration on distillation unit.	Knowledge about distillation unit
7	Packing of material and handling & storing.	Knowledge about packing and its methods.
8	Practice on Labeling	Knowledge about labeling
9	Routine maintenance practice of distillation unit.	Knowledge about care & maintenance of distillation unit.

Tools & Equipments are required for 20 nos of Trainees in a batch.

SL.NO.	Description of Tools	Quantity
1	Working model of electrically operated distillation unit	1 no
2	Weighing balance	2 no
3	Container	10 nos
4	Small Compressor unit	1 no
5	Electrically operated Water bath	1 no

Demonstration to be given in related Industries on the following equipments

1	Reaction unit (Lab scale)
2	Water dematerializing unit
3	Hydro-steam (Field distillation) distillation unit
4	Hydro distillation unit
5	Deep freezer
6	Electrically operated Steam boiler
7	Glass line reactor
8	Chilling plant
9	Reaction unit (pilot plant)
10	Cooling tower
11	Catalytic hydrogenation apparatus
12	Disintegrator

LEVEL-I

MODULE –5

Name : Fractional Distillation operator

Sector : Fragrance, Flavour & Perfume.

Code No. : FFP 105

Entry Qualification & Age : Minimum 5th standard & 14 years of age

Terminal Competency : After completion of training, the candidate will be able to isolate fractions of essential oils in fractional distillation unit.

Duration : 240 hours

Contents

SL.NO	PRACTICAL	THEORY
1	Practice on general safety, health & hygiene and first aid. Safety aspects related to the trades.	General awareness on safety, health and first aid. Knowledge on related safety aspects related to the trades and remedies from accident.
2	Identification of different types of raw materials and its utilities.	Knowledge about perfumery. Fundamentals of essential oil, fragrance & flavour, natural raw materials and synthetic raw materials and its utilities
3	Procurement as per classification of raw materials on the basis of odour and taste.	Knowledge about raw materials on the basis of odour and taste.
4	Procurement as per classification of raw materials on the basis of volatility.	Knowledge about raw materials on the basis of volatility.
5	Practice on collection of materials & handling.	Information about material handling.
6	Demonstration on fractionation & its working. Demonstration on fractionation unit.	Introduction to fractionation unit and its working procedure.
7	Packing of material and handling & storing.	Knowledge about packing and its methods.
8	Practice on labeling .	Knowledge about labeling
9	Routine maintenance practice of fractionation unit.	Knowledge about care & maintenance of fractionation unit.

Tools & Equipments are required for 20 nos of Trainees in a batch.

SL.NO.	Description of Tools	Quantity
1	Working model of electrically operated distillation unit	1 no
2	Weighing balance	2 no
3	Container	10 nos
4	Small Compressor unit	1 no
5	Electrically operated Water bath	1 no

Demonstration to be given in related Industries on the following equipments

1	Reaction unit (Lab scale)
2	Water dematerializing unit
3	Hydro-steam (Field distillation) distillation unit
4	Hydro distillation unit
5	Deep freezer
6	Electrically operated Steam boiler
7	Glass line reactor
8	Chilling plant
9	Reaction unit (pilot plant)
10	Cooling tower
11	Catalytic hydrogenation apparatus
12	Disintegrator

LEVEL-I

MODULE –6

Name : Solvent Extraction Operator

Sector : Fragrance, Flavour & Perfume.

Code No. : FFP 106

Entry Qualification & age : Minimum 5th standard & 14 years of age

Terminal Competency : After completion of training, the candidates will be able to operate solvent extraction units.

Duration : 240 hours

Contents

SL.NO	PRACTICAL	THEORY
1	Practice on general safety, health & hygiene and first aid. Safety aspects related to the trades.	General awareness on safety, health and first aid. Knowledge on related safety aspects related to the trades and remedies from accident.
2	Identification of different types of raw materials and its utilities.	Knowledge about perfumery. Fundamentals of essential oil, fragrance & flavour, natural raw materials and synthetic raw materials and its utilities
3	Procurement as per classification of raw materials on the basis of odour and taste.	Knowledge about raw materials on the basis of odour and taste.
4	Procurement as per classification of raw materials on the basis of volatility.	Knowledge about raw materials on the basis of volatility.
5	Practice on collection of materials & handling.	Information about material handling.
6	Demonstration on solvent extraction & working methodology. Demonstration on solvent extraction unit.	Introduction and working procedure of solvent extraction and its accessories.
7	Packing of material and handling & storing.	Knowledge about packing and its methods.
8	Labeling.	Knowledge about labeling and its mode.
9	Routine maintenance of solvent extraction unit.	Knowledge about care & maintenance of solvent extraction unit.

Tools & Equipments are required for 20 nos of Trainees in a batch.

SL.NO.	Description of Tools	Quantity
1	Working model of solvent extraction unit	1 no
2	Weighing balance	2 no
3	Container	10 nos
4	Small Compressor unit	1 no

5	Electrically operated Water bath	1 no
6	Blending tank	1 no
7	Alluminium bottle	10 nos

Demonstration to be given in related Industries on the following equipments

1	Reaction unit (Lab scale)
2	Water dematerializing unit
3	Electrically operated Steam boiler
4	Glass line reactor
5	Chilling plant
6	Reaction unit (pilot plant)
7	Cooling tower
8	Catalytic hydrogenation apparatus
9	Disintegrator

LEVEL-I

MODULE –7

Name : Aroma Chemical Assistant

Sector : Fragrance, Flavour & Perfume.

Code No. : FFP 107

Entry Qualification & Age : Minimum 5th standard & 14 years of age

Terminal Competency : After completion of training, the candidate will be able to assist in production of aroma chemicals.

Duration : 240 hours

Contents

SL.NO	PRACTICAL	THEORY
1	Practice on general safety, health & hygiene and first aid. Safety aspects related to the trades.	General awareness on safety, health and first aid. Knowledge on related safety aspects related to the trades and remedies from accident.
2	Identification of different types of raw materials and its utilities.	Knowledge about perfumery. Fundamentals of essential oil, fragrance & flavour, natural raw materials and synthetic raw materials and its utilities
3	Procurement as per classification of raw materials on the basis of odour and taste.	Knowledge about raw materials on the basis of odour and taste.
4	Procurement as per classification of raw materials on the basis of volatility.	Knowledge about raw materials on the basis of volatility.
5	Demonstration on reaction unit & working methodology.	Introduction and working procedure of reaction unit.
6	Practice on collection of materials & handling.	Information about material handling.
7	Demonstration of packaging of materials and its methodology.	Introduction to packaging and its methods.
8	Demonstration and practical applications of chemicals.	Knowledge about chemicals.
9	Knowledge about aroma chemicals produced & its odour.	Knowledge about aroma chemicals produced.
10	Practice on labeling	Knowledge about labeling .
11	Routine maintenance of solvent reaction unit.	Knowledge about care & maintenance of reaction unit.

Tools & Equipments are required for 20 nos of Trainees in a batch.

SL.NO.	Description of Tools	Quantity
1	Working model of solvent extraction unit	1 no
2	Weighing balance	2 no
3	Container	10 nos
4	Small Compressor unit	1 no
5	Electrically operated Water bath	1 no
6	Blending tank	1 no
7	Alluminium bottle	10 nos

Demonstration to be given in related Industries on the following equipments

1	Reaction unit (Lab scale)
2	Water dematerializing unit
3	Electrically operated Steam boiler
4	Glass line reactor
5	Chilling plant
6	Reaction unit (pilot plant)
7	Cooling tower
8	Catalytic hydrogenation apparatus
9	Disintegrator

LEVEL-II

MODULE 1

Name : **Processing Assistant**

Sector : **Fragrance, Flavour & Perfume.**

Code No. : **FFP 208**

Entry Qualification & Age : Minimum 5th standard & 14 years of age
and completion of any of the module no 5, 6 or 7 of level I

Terminal Competency : After completion of training, the trainees will be able
to assist in production of fragrance.

Duration : 300 hours

Contents :

SL.NO	PRACTICAL	THEORY
Basic Knowledge & Skill area		
1	Practice on general safety, health & hygiene and first aid. Safety aspects related to the trades.	General awareness on safety, health and first aid. Knowledge on related safety aspects related to the trades and remedies from accident.
2	Identification of different types of raw materials and its utilities.	Knowledge about perfumery. Fundamentals of essential oil, fragrance & flavour, natural raw materials and synthetic raw materials and its utilities
3	Procurement as per classification of raw materials on the basis of odour and taste.	Knowledge about raw materials on the basis of odour and taste.
4	Procurement as per classification of raw materials on the basis of volatility.	Knowledge about raw materials on the basis of volatility.
5	Practice on collection of materials & handling.	Information about material handling.
6	Demonstration on reaction, distillation, solvent extraction unit & working methodology.	Introduction and working procedure of reaction, distillation, solvent extraction unit.
7	Working in a reaction, distillation, solvent extraction unit.	Knowledge about reaction, distillation, solvent extraction unit.
8	Practical application of chemicals, solvents used.	Knowledge about chemicals & solvents.
9	Demonstration and practical application of aroma chemicals produced & its odour.	Knowledge about aroma chemicals produced.
10	Demonstration on packaging of materials and its methodology. Practice on packing of material and handling & storing.	Knowledge about packing and its methods.
11	Practice on labeling	Knowledge about labeling
12	Routine maintenance of reaction, distillation and solvent extraction unit.	Knowledge about care & maintenance of solvent extraction unit.

Tools & Equipments are required for 20 nos of Trainees in a batch.

SL.NO.	Description of Tools	Quantity
1	Working model of solvent extraction unit	1 no
2	Weighing balance	2 no
3	Container	10 nos
4	Small Compressor unit	1 no
5	Electrically operated Water bath	1 no
6	Blending tank	1 no
7	Aluminum bottle	10 nos

Demonstration to be given in related Industries on the following equipments

1	Reaction unit (Lab scale)
2	Water dematerializing unit
3	Electrically operated Steam boiler
4	Glass line reactor
5	Chilling plant
6	Reaction unit (pilot plant)
7	Cooling tower
8	Catalytic hydrogenation apparatus
9	Disintegrator
10	Steam distillation unit
11	Hydro-distillation unit
12	Hydro-steam distillation unit