

केल्यानें होत आहे रे I आधीं केलेंची पाहिजे II

Bhartiya Shikshan Prasarak Sanstha Amabajogai's

**Shri Siddheshwar Mahavidhalaya, Majalgaon**



## Internal Quality Assurance Cell

### Criterion 2 - Teaching Learning and Evaluation

#### 2.3.1 Student Centric Methods

#### Problem Solving Methods (Project/Field Work)

*Qant*

**IQAC Coordinator**

Website: [www.ssmm.ac.in](http://www.ssmm.ac.in)



*[Signature]*

**Principal**

**Principal**

**Shri Siddheshwar Mahavidyalaya  
Majalgaon, Dist. Beed 431 131**





- 4) How it is harmful?
- 5) How we can prepare safe organic shampoo?

**Connection with the curriculum: -**

In sixth semester syllabus of B.Sc.T.Y. there is one topic named Fats, oils and detergents, which includes soaps, There are hard soaps and soft soaps.

Shampoo

falls under **soft soaps**.

**Intended Learning Objectives/Outcomes:-**

Students **will be able to understand**

- a) Different types of shampoo according to physical state as semisolid, liquid.
- b) Use of shampoo for different problems such as hair fall, dandruff.
- c) Constituent chemicals in it.
- d) Cleansing action of soap. (Hands on activity)
- e) Harmful effects of shampoo on skin, hairs, eyes.
- f) Student will understand a bit economic market of shampoo. (Interdisciplinary touch)
- g) Can prepare and use organic shampoo as a part of Self-reliant India that is 'Aatmnirbhar Dharat' (Value education)

**3) Sequence of activities:-**

Students will try to **solve the problem** by carrying following activities

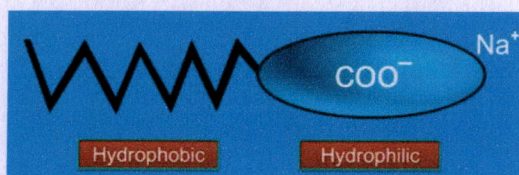
- i) Students will collect literature, take review of it.
- ii) They will note the chemicals that are used in shampoo.
- iii) Students will collect the raw material required for synthesis of organic shampoo (Neem, Tulsi, Shikakai, Ritha, Amla) having resembling properties as that of chemical constituents of shampoo.
- iv) Students will prepare organic shampoo scientifically (adopts various steps like washing, drying, crushing, stirring, heating, filtration)
- v) They will check quality terms like PH, foaming capacity etc.



#### 4) Outcomes:-

Once the activity will have been done, the report of student will be the outcome and it will be as

- Understood the types of shampoos with respect to their state, necessity.
- Realized the effects as hair fall, itching, dryness of hair, irritation of eyes.
- Understood how cleansing action takes place (reaction)



#### 5) Assessment:-

##### Formative assessment:-

Students will be assessed at every stage of activity.

- ❖ students will provide preliminary explanations about shampoo as types, side-effects
- ❖ Did they understand and perform laboratory activities?
- ❖ Can they justify their explanations?
- ❖ Can they write conclusions properly?

##### Summative assessment:-

- ❖ Will conduct test

#### 6) Resources:-

- 1) Reference books of organic chemistry like a text book of organic chemistry by B. S. Bhal and Arun Bhal.
- 2) Computer, internet facility to collect literature and other information.
- 3) Apparatus (heating mantle, round bottom flask, water condenser, petri plates, dropper, test tubes, PH paper etc.) required for practical work.





7) Timescale:-

Tentatively requires 1 month duration

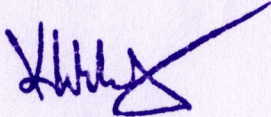
1<sup>st</sup> week - Review of literature

2<sup>nd</sup> week - Collection of raw material

3<sup>rd</sup> week - Lab work

4<sup>th</sup> week - Report writing.

*B-V*  
DE. V. V. Borgaonkar

  
Principal  
Shri Siddheshwar Mahavidyalaya  
Majalgaon, Dist. Beed 431 131

## ANALYSIS OF BORE WATER SAMPLES FROM DIFFERENT AREAS OF THE MAJALGAON CITY

Course Co-ordinators :- Dr. V. V. Borgaonkar and Dr. G. M. Dhond

### **COLLECTION OF SAMPLE:-**

Prepared format is used for collection of primary information and data of the bore well owners. Survey of different municipal ward was carried out. About 22 different sites from different wards were identified (Table - 1). Water sample from these sites were collected in sample bottles and brought to chemistry laboratory for further analysis.

### **ANALYSIS OF SAMPLE:-**

For the analysis, standard method was followed. Important parameter TDS was analyzed. These results were compared with WHO (World Health Organization) and BIS (Bureau of Indian Standard) for drinking water.

### **RESULTS :-**

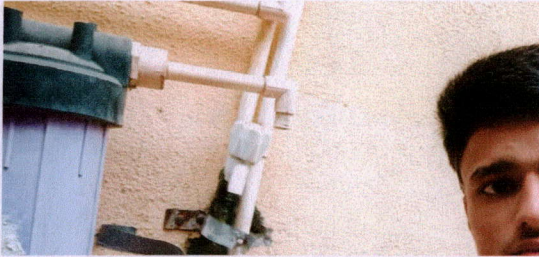
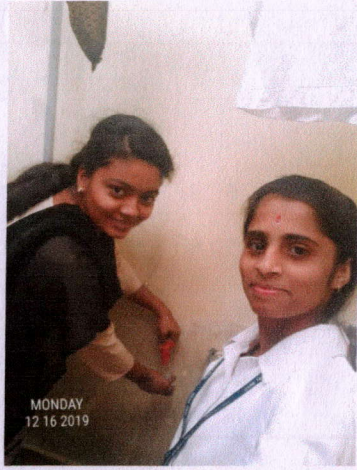
As the table shows according to standards for drinking water, major areas of the Majalgaon city having TDS values ranging from 500mg/L to 800mg/L. The lowest value observed in sample 5.1 i.e. 178mg/L and the highest TDS value observed in sample 17.1 i.e. 1143mg/L. The study further reveals that out of 53 samples 47 samples fall in hard category as they fall >300 permissible limits, while one sample is having highest value of 1143mg/L is unacceptable for drinking purpose, whereas 6 samples are having values <300mg/L within the permissible limits, falls in soft category and is acceptable for drinking purpose. When sample TDS values were compared with BIS values only 13 samples out of 53 fall under safe criteria having values <500mg/L.

**Outcome:-** The values of TDS of major water samples fall above permissible limits in the city. TDS up to 500 mg/L can be relished if got acclimatized to or by refilling the bore wells, and it was suggested to the Bore owner.

#### **Students Participated**

Shreya Bharatrao Swami, Anmole Solanke, Sagar Gholap, Divya Sawade, Vidya Basanwad, Prasad Gunjkar









**Students Collecting  
bore water Samples**



B. V. V.  
Dr. Y. V. Bolgaonkar



**Principal  
Shri Siddheshwar Mahavidyalaya  
Majalgaon, Dist. Beed 431 131**