



## International Journal of Pharmaceutical Sciences and Drug Analysis



E-ISSN: 2788-9254  
P-ISSN: 2788-9246  
IJPSDA 2023; 3(1): 119-122  
[www.pharmacyjournal.info](http://www.pharmacyjournal.info)  
Received: 11-01-2023  
Accepted: 15-02-2023

**Sadhu Shreyansh**  
UG Scholar from Jawaharlal  
Nehru Homoeopathic Medical  
College, Parul University,  
Vadodara, Gujarat, India

**Chakraborty GS**  
Principal of PIPR, Parul  
institute of Homoeopathy and  
Research, Parul University,  
Vadodara, Gujarat, India

**Pramanick Monimala**  
Associate Professor,  
Department of Homoeopathic  
Pharmacy, Parul Institute of  
Homoeopathy and Research,  
Parul University, Vadodara,  
Gujarat, India

**Bhadoria Suraj Singh**  
Assistant Professor,  
Department of Homoeopathic  
Pharmacy, Parul Institute of  
Homoeopathy and Research,  
Parul University, Vadodara,  
Gujarat, India

**Desai Poorav**  
Dean & Principal Jawaharlal  
Nehru Homoeopathic Medical  
College, Parul University,  
Vadodara, Gujarat, India

**Bhatt Tejas Kumar**  
Faculty of CR4D Department,  
Parul University, Vadodara,  
Gujarat, India

**Reddy Santosh**  
HOD & Professor, Department  
of Homoeopathic Pharmacy,  
Jawaharlal Nehru  
Homoeopathic Medical college,  
Parul University, Vadodara,  
Gujarat, India

**Correspondence Author:**  
**Chakraborty GS**  
Principal of PIPR, Parul  
institute of Homoeopathy and  
Research, Parul University,  
Vadodara, Gujarat, India

### Compare absorbance value of medicated glycerin prepared by *Berberis vulgaris*- Q and *Alfalpa*- Q with qualitative assessment by UV- visible spectrophotometer

**Sadhu Shreyansh, Chakraborty GS, Pramanick Monimala, Bhadoria  
Suraj Singh, Desai Poorav, Bhatt Tejas and Reddy Santosh**

DOI: <https://doi.org/10.22271/27889246.2023.v3.i1b.56>

#### Abstract

**Background:** Through this research, work prepared homoeopathic medicated glycerol with *Berberis vulgaris*- Q and *Alfalpa*- Q in the drug and vehicle ratio (1:9) with qualitative assessment done by UV-Visible spectrophotometer.

**Methodology:** Homoeopathic medicated glycerine was prepared by the mixing *Berberis vulgaris* and *Alfalpa*- Q in a definite proportion of drug and vehicle as (1:9) separately. The samples were divide into three groups as Standard group, Main group and control group.

**Results:** The absorbance value of *Alfalpa* in Glycerine is 0.884 at 411.00 nm and absorbance value of *Berberis vulgaris* in glycerine is 0.891 at 473.00 nm, *Alfalpa* Q is 0.996 at 673.00 nm, *Berberis vulgaris* Q is 0.997 at 529.00 nm

**Conclusion:** Prepared glycerine from standard *Berberis vulgaris*- Q and *Alfalpa*- Q separately gives better results analysed by UV- visible spectrophotometer.

**Keywords:** UV- visible spectrophotometer, *Glycerol*, *alfalfa* Q, *Berberis vulgaris* Q

#### Introduction

Glycerine, specifically 1, 2, 3-propanetriol, is a possibly significant biorefinery feedstock and is a side-effect of biodiesel creation. It is delivered during the transesterification of vegetable oils or creature fats [1]. In our past study [2], we revealed that glycerine is productively switched over completely to lactic corrosive under soluble aqueous circumstances. In expansion, H<sub>2</sub> is delivered in practically a similar yield as lactic corrosive. Lactic corrosive is getting consideration as a material for delivering biodegradable lactic corrosive polymers [11]. We presently report that NaHCO<sub>3</sub> (as a wellspring of CO<sub>2</sub>) is switched over completely to a formate salt when glycerine is utilized as a diminishing specialist in HTW. Glycerine is changed over completely to lactate. Under these response conditions. The impact of response conditions was likewise explored exhaustively, for example NaHCO<sub>3</sub> amount, NaOH fixation, response temperature and time. Glycerine (close to 100%), NaHCO<sub>3</sub> (almost 100%) and NaOH (96%) were gotten from Wako Unadulterated Compound Ventures, Osaka, and utilized as test materials. In this review, NaHCO<sub>3</sub> was utilized as a CO<sub>2</sub> asset to improve on tasks and to take into consideration a precise measurement of CO<sub>2</sub>. 8d The schematic drawing of the exploratory set-up can be found elsewhere [12].

#### *Berberis vulgaris*

*Berberis vulgaris* L. var. *asperma* Wear (Berberidaceae) is a shrubbery with yellow to brown shaded bark. The plant has obovate leaves, bearing pendulous yellow blossoms in spring prevailed by elongated red shaded organic products (barberry). Different pieces of this plant including its root, bark, leaf and natural product have been utilized as society medication for long in Iran. In Iranian conventional medication a few properties, like antibacterial, antipyretic, antipruritic and antiarrhythmic exercises for various pieces of *Berberis vulgaris* have been accounted for with obscure systems of activities (Zargari, 1983; Aynehchi, 1986; Nafissi, 1990) [7, 11]. As it is progressively accepted.

Now that customary drugs become more famous around the world, there is aggregating proof proposing restorative plants are limitless repositories of medications. The astounding primary variety among their dynamic parts makes them a valuable wellspring of novel helpful mixtures. Scientists with interest in regular items have strengthened their endeavors towards logical assessment of conventional prescriptions. Past pharmacological investigations on berberine, an isoquinoline alkaloid found in root and bark of *Berberis vulgaris*, exhibited that it had strong vasodilatory and antiarrhythmic action, and delayed the activity possible length in Purkinje strands and ventricular muscles (Chiou *et al.*, 1991; Ricciopo, 1993; Kathleen, 2000) [9, 5]. There is some proof for calming and antinociceptive impacts of isoquinoline alkaloids found in *Berberis vulgaris* (Kupeli *et al.*, 2002) [6].

### Alfalfa

*Medicago sativa* Linn. Regularly known as 'Lucerne' or 'Hay', has a place with the family fabaceae broadly happens in the caucasian district and in the rocky districts of Iran, Afganistan and neighboring regions. The developed structure likely emerged in western Persia, whence it has spread to numerous nations. It is utilized as tonic due to presence of high level of proteins (60.5%), minerals, catalysts, nutrients and so forth. Horse feed is an important wellspring of nutrients A furthermore, E new is plentiful in L-ascorbic acid (1.78 mg/g) in any case, it loses 80% of nutrients on drying. The catalysts announced in hay are amylase, emulsion, coagulase peroxidase, erepsin, lipase, invertase and pectinase (W.I., 1962; Uphof, 1968) [7].

### Materials & Methodology

**Type of study:** Analytical study.

**Site of study:** CR4D (Centre of Research for development Parul University).

**Duration:** 2 Week

**Tools:** UV- visible spectrophotometer (Double beam).

**Materials:** Beaker (100 ml capacity), pipette 10 ml capacity, Glass rod, measuring cylinder (100 ml capacity).

**Medicinal products:** *Berberis vulgaris*- Q, *Alfalfa*- Q was purchased from GMP Certified Pharmaceutical Pvt. Ltd. (SBL), Glycerine Purchase from Chemdyes Corporation Laboratory chemicals, Industrial chemicals, solvents, metallurgy chemicals, food preservatives, filter papers, safety Goods.

**Vehicle:** Glycerine

### Preparation

Preparation of Homoeopathic medicated glycerol with *Berberis vulgaris*- Q, *Alfalfa*- Q and vehicle glycerine in a definite proportion of drug and vehicle as (1:9) separately.

### Standard sample

1. *Berberis vulgaris*- Q

2. *Alfalfa*- Q

### Main sample

1. *Alfalfa*- Q + Glycerine (1:9) 10 ml
2. *Berberis vulgaris*- Q + Glycerine (1:9) 10 ml

### Control sample

1. Glycerine

### (Steps to follow)

**Sterilization:** Cleansing of all the equipment's by strong alcohol with drying by Hot air oven for 15 minutes.

**Measurement:** Take appropriate amount of Medicine and vehicle with pipette (10 ml capacity) in the clean, dry beaker. Like; Medicine.

1. **Homoeopathic Medicated glycerol (1:9):** *Alfalfa* Glycerine
2. **Homoeopathic Medicated glycerol (1:9):** *Berberis vulgaris* glycerine

### Mixing

Apply gentle mixing the given formulation by glass rod until and unless if homogeneous mixture formed.

### Filling

The prepared mixed variety of formulation of Homoeopathic medicated glycerine should be filled in the hard glass bottle. Which should be clean, sterile and non-coloured bottles.

### Storage

The given formulation should be preserved into the hard glass bottle, which should be away from dampness, sunlight, strong smelling bottles and cool, dark place.

### Labelling

Paste the label on the bottom of hard glass bottle as;

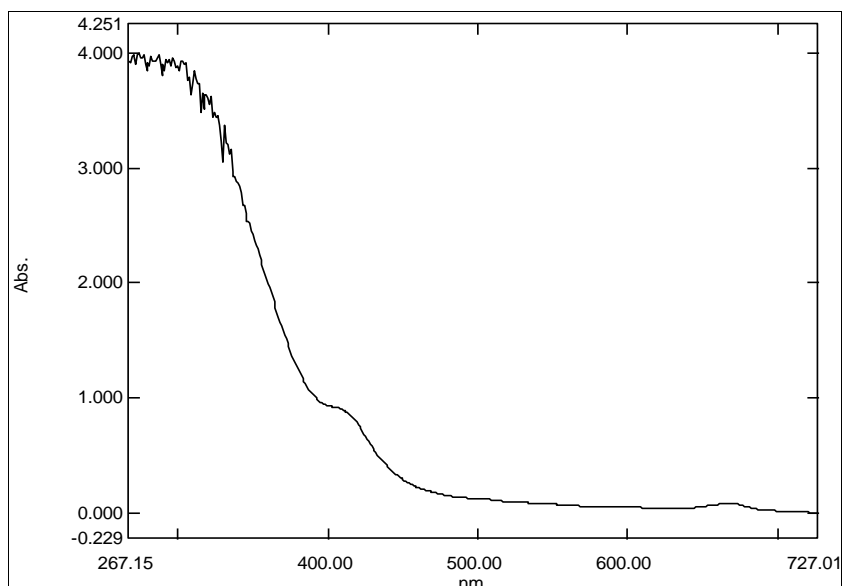
- Name of formulation
- Name of Medicine with quantity
- Name of vehicle with quantity
- Drug and vehicle ratio
- Manufacture Date
- Manufacturer By
- Indications
- Storage

### Analysis

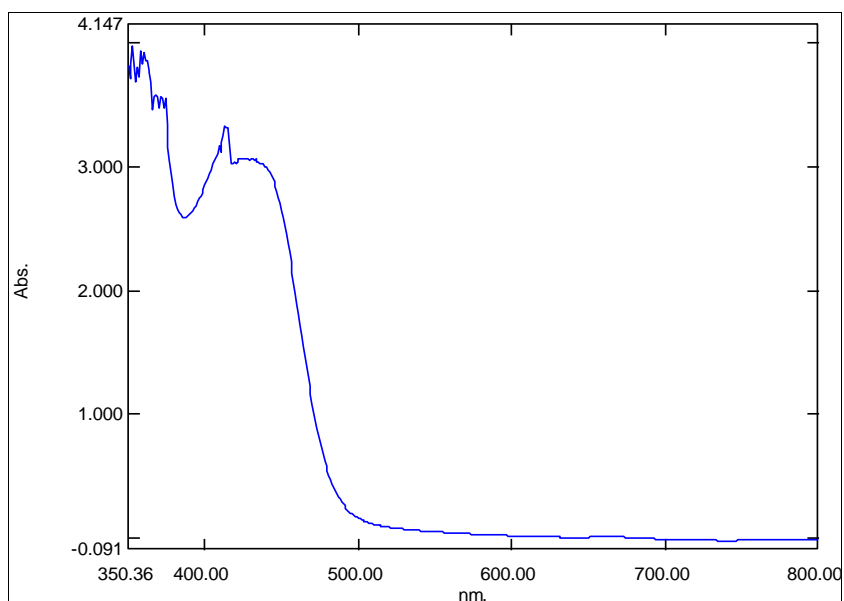
The prepared formulation of in all ratio were categorized into three main groups. Such as; Standard group, Main sample group and Control group. Around (3-4) ml of samples from each group were placed in the sterile, dry cuvette in UV- VIS Chamber.

### Results

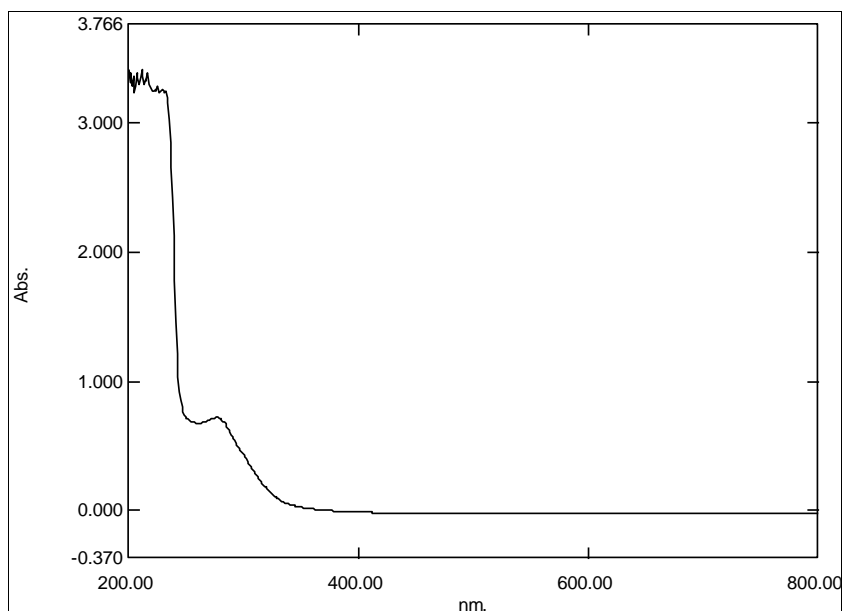
The absorbance value of *Alfalfa* Glycerine is 0.884 at 411.00 nm and absorbance value of *Berberis vulgaris* glycerine is 0.891 at 473.00 nm, *Alfalfa* Q is 0.996 at 673.00 nm, *Berberis vulgaris* Q is 0.997 at 529.00 nm.



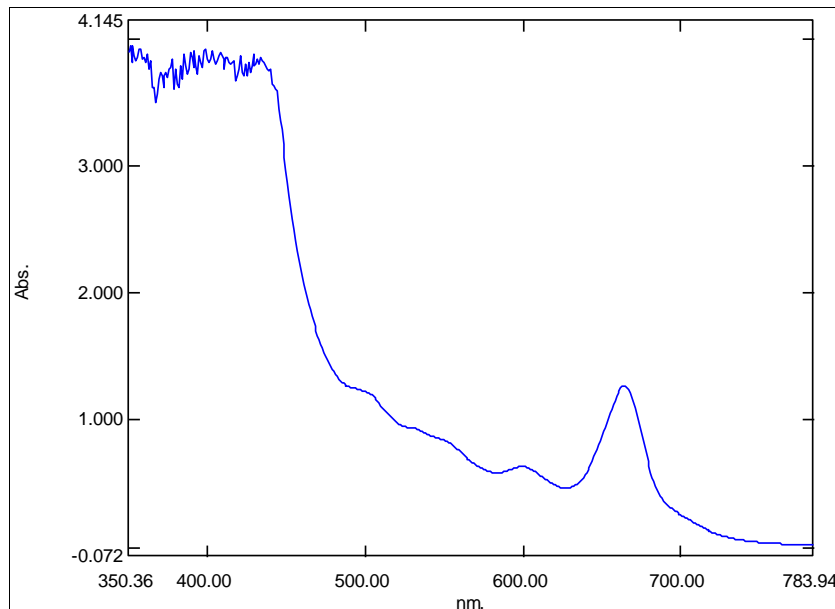
**Fig 1:** Absorbance capacity of *Alfalfa* glycerine



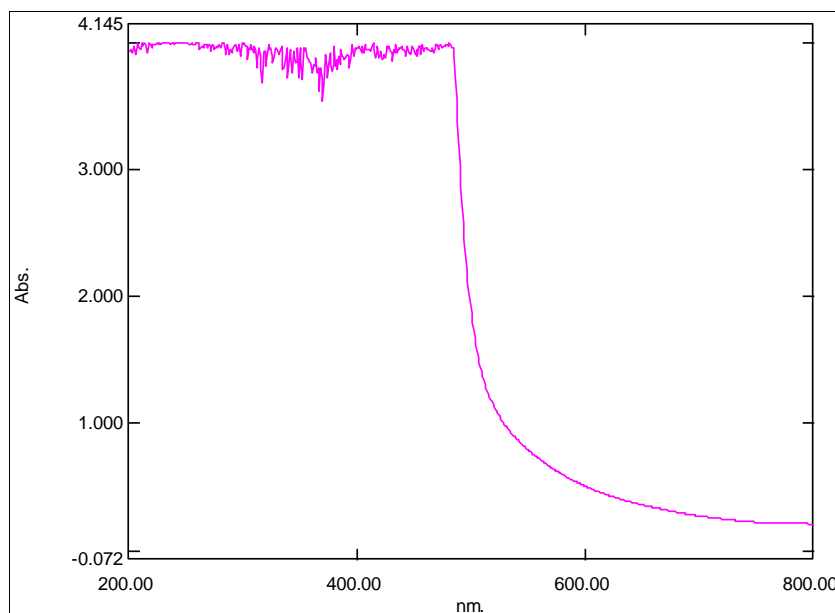
**Fig 2:** Absorbance capacity of *Berberis vulgaris* glycerine



**Fig 3:** Absorbance capacity of glycerine



**Fig 4:** Absorbance capacity of *Alfalfa-Q*



**Fig 5:** Absorbance capacity of *Berberis vulgaris-Q*

### Conclusion

The prepared formulation of homoeopathic medicated glycerine shows miscibility in respect of drug and vehicle ratio, after assessment done by UV-Visible spectrophotometer.

### Acknowledgement

Authors would like to thank Dean and principal Dr Poorav desai and CR4D Department for the support in this research work

### References

- Behr A, Eilting J, Leschinski J, Lindner F, Green Chem. 2008;10:13.
- Zheng YG, Chen XL, Shen YC. Chem. Rev. 2008;108:5253.
- Kishida H, Lett Chem. 2005;34:1560.
- Kishida H, Jin FM, Moriya T, Enomoto H. Kagaku Kogaku Ronbunshu. 2006;32:535.
- Shen Z. Ind. Eng. Chem. Res. 2009;48:8920.
- Amass W, Amass A, Tighe B. Polym. 1998;47:89-144.
- Jin F, Kishita A, Moriya T, Enomoto H, Supercrit J. Fluids. 2001;19:251.
- Jin F, Moriya T, Enomoto H. Environ. Sci. Technol. 2003;37:3220.
- Chiou WF, Yen MH, Chen CF. Mechanism of vasodilatory effect of berberine in rat mesenteric artery. European Journal of Pharmacology. 1991;204:35-40.
- Kupeli E, Kosar M, Yesilada E, Husnu K, Baser C. A comparative study on the anti-inflammatory, antinociceptive and antipyretic effects of isoquinoline alkaloids from the roots of Turkish Berberis species. Life Sciences. 2002;72:645-657.
- Zargari A. Medicinal Plants, vol. 1. Tehran University Press, Tehran. 1983. p. 68.
- Rashmi R, Sarkar M. Cultivation of alfalfa (*Medicago sativa* L). Ancient science of life. 1997 Oct;17(2):117.