



## PHARMACEUTICAL STUDY OF SOSHAJIT SYRUP & LAKSHYADI TAILA IN BALASHOSHA

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### ABSTRACT

*Ayurveda* has taken the foremost place in the management of various diseases; one of them is *Balashosha*, which can be correlated with Protein Energy Malnutrition (PEM) considering its clinical manifestation. The term '*Balashosha*' means '*Suskata*' i.e. '*Khshaya*' or emaciation of the child. The symptoms like *Suskata*, *Arochaka*, *pratisyaya*, *jwara*, *kasa*, *mukhanetrasnigdghata* and *mukhanetrasuklata* found in this disease. Internal use of *Shoshajit ghritha* and some other formulations, some single drugs with external massage of *Lakshyadi taila* is useful in *Balashosha* as per *Astanga Hridaya Uttarantra 2/50*. In the present study *Shoshajit syrupis* selected containing same drugs used in *Shoshajitghritha* orally in syrup base to make palatable than *ghritha* and *Lakshyadi taila* is selected for external massage. The

present study is to evaluate the effect of *Shoshajit syrup* and *Lakshyadi taila* in *Balashosha* which was prepared at Pharmacy of P.G Department of *Rasashastra & Bhaishajya Kalpana*, G.A.M Puri, from pharmacognostically authenticated raw drugs & it is followed by detail analytical study as per standard protocol. The observations were systematically recorded. Presence of phytochemical components like carbohydrate, protein, tannin & flavonoids support the action of the drugs used for *Balashosha*.

**KEYWORDS:** Balashosha, Shoshajit syrup, Lakshyadi taila, Phytochemical Components.

## INTRODUCTION

The disease *Balashosha* means emaciation of child or *Suskata* of child with the symptoms of *Arochaka*, *pratishyaya*, *jwara*, *kasa*, *mukha* and *netrasnigdhatata* and *shuklata* is an exclusive disease of childhood that is limited within the child of 16 years and also is exclusively described in *Astanga Hridaya*, *Uttaratantra* Chapter-2. A little description regarding *Suskata* or emaciation is found in other Ayurvedic texts in the context of '*Shosha*', '*Karshya*' & '*Rajajakshma*'. Synonymously *Balashosha* is locally used as *Sukha*, *Sukhandi*, *Masana* etc.

In *Balashosha* causes are more day time sleeping, consumption of cold water and *shlesmagunayuktadugdhasavana*, by which *Kapha Doshais* increased and obstructs *Rasvahasrotas* and then there is impairment in formation and poshana of *Rasa Dhatu*. According to *Uttaratarata Dhatu Poshana* theory all the further *Dhatu*s get impairment in nutrition manifesting above sign and symptoms.

In Protein Energy Malnutrition, which is defined as a range of pathological conditions arising from coincidental lack in varying proportions of proteins and calories, occurring most frequently in infants and young children and commonly associated with infection. There is inadequate food supplementation due to individual factors like bad start with low birth weight and baby born from malnourished mother, Family factors like bad economy or poverty that is inability to pay for adequate food, ignorance of period of weaning from breast milk, faulty food habits and feeding, large family, maternal illiteracy. Community factors like National poverty, poor educational status, cultural practice and beliefs. Intestinal malabsorption, parasitic infections, Tuberculosis, Diabetes, metabolic disorders also causes malnutrition.

Thus there is impairment in growth and development with associated symptoms of vitamin deficiency like Angular Stomatitis, Glossitis, Anaemia, Thin lustreless skin are found and lastly immunity of the child is hampered with recurrent systemic infections & the child may become morbid.

In this study *Shoshajit syrup* is prepared from eight single drugs *Jastimadhu*, *Pippali*, *Lodhra*, *Padmaka*, *Chandana*, *Kamala*, *Talisa*, *Sariba* with sugar in syrup base that each single drug is taken in same amount and decoction is made from it and then sugar added to it for preservation & to make it viscous then it became more palatable for children. In *Lakshyadi taila*, there are some single drugs like *Aswagandha*, *Haridra*, *Renuka*, *Kotha*, *Motha*, *Chandana*, *Murba*, *Rasna*, *Yastimadhu*, *Sounf* etc. taken in equal amount and *Lakshya rasa* is

made from *Lakshya* and *Lakshyaditaila* is prepared from *Tilataila* with *Tailapaka Vidhiin* addition to dadhimastu for external massage. These are taken with hypothesis that these drugs are effective and safe for treating Balashosha. These are also plentifully available and economically sound where as synthetic supplemental drugs and diets cause some side effect such as increased bowel moments, nausea, thirst, blotting, cramps, fatigue, headache and also reduces appetite.

### Analytical study

After preparation of Shosajit syrup and Lakshyaditaila has been send to Quality Control Labrotary ALN Rao Memorial Ayurvedic medical college, Koppa, Kranataka for analytical study of the drug. The test report following to all analytical figures are enclosed here.

### Analytical report



**QUALITY CONTROL LABORATORIES**  
**ALN RAO MEMORIAL AYURVEDIC MEDICAL COLLEGE**  
**AND PG CENTRE**  
**KOPPA, DISTRICT: CHIKMAGALUR, KARNATAKA, 577126**

Reference Number: QC/ST/15/2018

Date: 20<sup>th</sup> April 2018

Purpose: Analysis of Shoshajit syrup .....

**Result:**

**Organoleptic Characters**

Colour	Brown
Taste	Sweet
Odour	Characteristic
Texture	Viscous liquid

**A. Physico-chemical Parameters**

pH	5.36 ± 0.10
Specific gravity	1.3511
Weight (gm) per ml	1.3468
Total Solid	45.41%
Viscosity at 30°C	52.34 cP
Refractive index at 30°C	1.4676

**Preliminary Qualitative Test For Phytochemicals**

Carbohydrates	Present
Protein	Present
Alkaloids	Present
Glycosides	Present
Flavonoid	Present
Tannin	Present
Steroids	Present
Triterpenoides	Present

**Patron: Honourable Shri Aroor Ramesh Rao**  
**Laboratory is not liable to bear any legal action or dispute based on this report**



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**Quantitative Test**

Total Sugar	42.25%
Reducing Sugar	7.10%
Non-reducing Sugar	35.15%
Sodium	0.25%
Potassium	0.11%

**Microbial Test**

Total aerobic counts	Nil
Total fungal count	Nil
<i>Escherichia coli</i>	Absent
<i>Staphylococcus aureus</i>	Absent

**Thin Layer Chromatography**

Material Used: Syrup

Solvent System: Benzene: Butanol: Acetone: Water:: 20:30:40:10

Spraying Agent: Alcoholic Sulphuric Acid

Rf	Under Long UV Before Derivatization	Under Long UV After Derivatization
0.08	Fluorescent white	Fluorescent white
0.26	Pale fluorescent blue	Light fluorescent white
0.42	Pale fluorescent blue	Light fluorescent white
0.68	Pale fluorescent blue	Fluorescent white
0.84	Light fluorescent blue	Fluorescent white

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Reference Number: QC/ST/12/2018

Date: 12<sup>th</sup> April 2018

Purpose: Analysis of Lakshyadi Taila .....

**Result:****A. Organoleptic Characters**

Colour	Honey coloured
Odour	Characteristic strong
Texture	Viscous liquid

**B. Physico-chemical Parameters**

Loss on Drying at 105°C	0.09 %
Saponification value	164.24
Iodine value	81.55
Acid value	2.21
Peroxide value	3.56
Ester value	162.03
Refractive index at 30°C	1.4677
Specific gravity	0.9189
Weight (gm) per ml	0.9160
Viscosity at 30°C	52.46 cP
Rancidity test (Kreis test)	Negative
<b>Microbial Load</b>	
Total aerobic counts	Nil
Total fungal count	Nil

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**Thin Layer Chromatography**

Material Used: Methanolic fraction of oil

Solvent System: Toluene: Ethyl Acetate: Hexane:: 9:3:1

Spraying Agent: Alcoholic Sulphuric Acid

Rf	Under Long UV Before Derivatization	Under Long UV After Derivatization
0.22	Fluorescent blue	Light brown
0.37	Fluorescent yellow	Fluorescent blue
0.44	Pale fluorescent blue	Pale brown
0.55	Pale fluorescent blue	Pale fluorescent blue
0.73	Pale fluorescent blue	Blue

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## DISCUSSION

Phytochemical study of trial *Shoshajit syrup* proves that it is some extent nutritive and safe for study with pleasant odor and taste. *Lakshyaditaila* also safe, effective and rancidity free.

Considering individual property of single drugs used in trial drug it is found that although the drugs have multiple property and action. The properties which helps in management of *Balsosha* or PEM.

*Yasthimadhu* which is used in both the trial drugs have property of *Madhur rasa*, *snigdha guna*, *balyaprava*, mild expectorant, anti inflammatory, *Tridosahara*, *Rasayan*, *Balavarnakriti*, Hepato protective.

*Chandan* also used in both drugs have property of digestive and liver tonic. Other drugs in *Shosajit syrup* like *Pipali* have property of Expectorant, decongestant, deepan, metabolic stimulant, improves Liver function and regulates *bhutagni* in liver. *Lodhrais* *slesmagna*, *vatakaphahara*, *Arochakanasak* and *Jwara hara*. *Talisa* is *kaphanisaraka* (expectorant) *Balya*, *Rochana*, *Dipana* *Dhatwagnivardhana*, *Kaphavatasamaka* and *Jwaraghna*. *Sariba* is *Deepaka*, *Pachaka*, *Rochana*, *Jwara hara*, *kaphahara*, *Tridosasamaka*. *Mastu* is *Deepaka*

and pachaka. Padmaka is Kaphanasaka, ruchiker, jwarahara. Utpala is Kaphahara, jwarahara, madhuravipaka and Balya.

The drugs used in *Lakshyaditaila* are having properties of *Aswagandha* is kaphaghna, Deepana, Kaphavatasamaka, Balya, Rasayana and Brimhanya. Lakshya has the property of supplementation and prabhava of rejuvenation. Rasna is usnavirya and kaphavatasamaka. Katuki is Deepana, Swasakasahara, yakrutituttejana. Haridra is Aruchinasaka, LekhaniyaShoshahara. Mustaka is Deepaka, pachaka and aruchihara. Devadarukaphavatahara, Lekhaniya, Rasayana, Balya and madurarasayukta.

## CONCLUSION

Treatment principle of *Balashoshaka* is *Sampraptighatana* and *Brimhana* that is *Srotasodhana*, Agni deepana and Brumhana. The herbal drugs used in *Soshajit syrup* contain individually different property to satisfy our principle of treatment. Combined *Shoshajit syrup* is formed this drugs gives cumulative effect and becomes more potent. Sugar used in syrup it self is a rich source of Carbohydrate and energy. Thus *Shoshajit syrup* can satisfy our aim of study and by external application of *Lakshyaditaila* the drugs penetrates through skin and gives local effect. *Tilatailait* self Vatahara with *usnavirya*, *Snigdha guna* and balyaproperty according to Ayurvedic materiamedica. It can also act at tissue level penetrating in skin with the property of drugs used in *LakshyadiTaila*.

Thus both the trial drugs will be effective in treatment of *Balashosha* and also PEM.

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