Abstract
In Ayurvedic literature, when we say taila, then it means only tila taila. Varied descriptions are available in the texts. Its importance is mentioned in many places owing to its uses in many different ways. The whole plant body can be made useful, like the leaves are used as good hair washing products, seeds as digestive, laxative, useful in haemorrhoids. Tila in the form of oil can be used in vasti karmas, as nasya and also as eatables. It also possess doshahara action. Taila, is mentioned in the classics as an alleviator of vata dosha. It is even said that there is no other medication better than taila which can cure the vatika disorders. In the present article, the review and physico chemical analysis of tila taila is done. Along with the reviews collected from various sources, the physico chemical analysis of tila taila will provide more accurate data for its use in the treatment purpose.

Keywords
Tila, Taila, Tila Taila

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INTRODUCTION
Since ancient times in India, *tila* has been given much importance among the medicinal herbs. *Tila taila* is considered as the best among all the vegetable oils. It has both external and internal uses. It is one of the best remedy for pacifying *vata dosha* and can be applied in the *vatavyadhis*. Its external massage is good for skin, hair and joints and also removes skin dryness. The oil contains vitamin E for which it can penetrate the skin easily. This oil can reduce cholesterol and hence can be used in cooking. Its internal use is for improving health, maintaining iron level, controlling heart disease and improving strength. *Acharya Charaka* has grouped it in the *Mahakasayas* under *swedopaga* and *purisha virajaniya*. *Maharshi Sushruta* has placed *tila taila* among the best herbal oils.

AIMS AND OBJECTIVES
Review and Physico Chemical Analysis of *tila taila*.

MATERIALS
This article is based on a review of Ayurvedic texts. Materials related to *Tila* and *Taila* are collected to the utmost. References were collected from *Charaka Samhita, Sushruta Samhita, Astanga Hridaya* and books related to *Dravyaguna*. The sample test was done in the Drug Testing Laboratory of Govt. Ayurvedic College & Hospital, Jalukbari-14

DISCUSSION
*Tila*¹
Botanical name- *Sesamum indicum*
Family - *Pedaliaceae*
Classical names- *tila*
Vernacular names-
Eng.-sesame, gingelly
Hindi- til, gingli
Beng.-sanki til, khasla til, rakta til, bhadu til, kala til
*Tila* is an erect, glandular-pubescent, annual herb upto 95cm tall, branching from the base. Leaves alternate or lower opposite and often deeply 3 lobed, lobes lanceolate, serrate, puberulous beneath, upper leaves entire, lanceolate, much smaller, passing into bracts. Flowers ill smelling, white or pink with yellow marks, axillary, solitary, forming a false raceme at the end of branches. Fruits quadrangular, oblong, compressed capsules. Seeds many, obovoid, compressed, black or white.

Distribution: It is cultivated throughout India upto an altitude of 1200 m.
Parts used: Root, leaf, seed, oil

Actions and uses:
The leaves are demulcent and useful in dysentery, cholera infantum, urinary disorders, eye diseases and skin diseases. The seeds are astringent, emollient, demulcent, aphrodisiac, laxative, galactogogue, digestive, hair restorer and tonic. They are useful in haemorrhoids, ulcers, burns, dysentery, diarrhoea, polyuria, amennorhea, baldness, dermatopathy, migraine, alopecia, venereal disease, eye disease and obesity. The oil is bitter, astringent, digestive, antihelminthic, constipating and emollient. It is good for eye disease, burning sensation of legs, gonorrhoea, otalgia, obesity and emaciation. Externally it is used for dryness of skin and leucoderma.

Ayurvedic properties:
Rasa- madhura, katu, tikta, kashaya
Guna- guru, snigdha
Veerya- ushna
Vipaka- madhura
Doshaghnata- vatashamaka, kaphapittashamaka
Rogaghnata- vatashoola, amavata, suryavarta, indralupta, netra roga, atisara, grahami, arsha, raktarsha, pravahika, vatarakta, hikka, swasa, prameha, pravahika.

Karma- snehana, vedanasthapana, sandheeya, vranashodhana, vranaropana, keshya, medhya, dantya, balya, mutrajanana, rasayana

Chemical composition:
Neutral lipids, glycolipids and phospholipids, arginine, cystine, histidine, isoleucine, leucine, lysine, methionine, phenylalanine, threonine, tryptophan, tyrosine, valine, ascorbic acid, biotin, choline, folic acid, inositol, niacin, nicotinic acid, pantothenic acid, pyridoxine, riboflavin, sesamol, thiamine, galactose, glucose, 2-acetyl 3- methylfuran, 2-acetylpyrrole, sesamolinol, sesamol, octanol, phenol, palmitic, phytic and stearic acids, sitosterol.

Pharmacognosy:
The seeds are flattened, ovoid, pointed at one end, 3-4 mm long, 2mm broad and 1mm thick, whitish or black in colour, longitudinal ridges. The epidermis is characterized by a thin walled palisade, the anticlinal walls being more or less wavy, cells contain spherical mass of crystals of calcium oxalate. The remainder of the testa consists of collapsed cells with yellowish membrane on the inside. The endosperm and
cotyledons consist of cellulosic, polygonal parenchyma containing fixed oil and small aleurone grains. Starch is absent.

**Pharmacological activities:**
Cholesterolemic, antioxidant, hepatoprotective, nematicidal, antitumour, hypotensive, free radical scavenging activity.

**Substitutes and adulterants:**
Sesamum oil is used as substitute and adulterant to olive oil and almond oil.

**Taila**
There is no medication which excels oil in curing vatika diseases because of its vyavayi, usna (hot), guru (heavy) and sneha (unctuous) properties. When cooked or processed with other drugs, it becomes more powerful therapeutically. Taila alleviates vata. It does not aggravate kapha, promotes bodily strength, beneficial for skin, it is hot, stabiliser and controls the morbidity of the female genital organs. Oil from sesamum is sweet with accompanying astringent taste, subtle, hot in potency and vyavayi. It aggravates pitta, binds bowel and reduces the quantity of urine but does not aggravate kapha. It is the best among the alleviators of vata. It promotes strength, skin health, intelligence and power of digestion. In combination with various drugs, tila taila is said to cure all diseases. Due to the snigdha, ushna and guru nature of taila, if it is inconsistently taken for some time, it can alleviate vata very easily. Because vata is ruksha, sheeta and laghu in nature. So the gunas of taila can suppress the gunas of vata.

Taila in the form of Anuvasana Vasti: The channels in the body get cleansed by niruha. Administration of sansnehana or unctuous type of medicated enema to such person promotes his complexion and strength. There is no therapy better than the administration of oil (anuvasana vasti) which is specifically useful for the patients afflicted with diseases caused by vayu. The taila by its unctuousness, heaviness and heating property counteracts the unctuousness, lightness and cooling attributes of vayu respectively. Because of this, administration of oil (anuvasana vasti) instantaneously produces clarity of mind, and promotes energy, strength, complexion and agni(power of digestion and metabolism). Just as a tree irrigated with water at the root becomes beautiful with tender leaves, and during the course of time grows to produce flowers and fruits, similarly, a person becomes young and
beautiful by the administration of Anuvasana and snehana vasti.

RESULTS
The report of analysis of the sample of tila taila (500 ml) which was performed in the Drug Testing Laboratory in Govt. Ayurvedic College, Guwahati

Odour: characteristic
Colour: light golden brown transparent
Wt/ml: 0.862
Acid value: 17.87
Saponification value: 162
Iodine value: 113
Refractive index: 1.45

CONCLUSION
Tila taila is an important vatahara dravya. There are a number of references in the Ayurvedic classics which shows the effect of tila taila on vata dosha. The use of tila in the form of oil can be used as vasti. Vasti, which is said as the best vatahara procedure, taila when administered in the form of vasti can prove to be more effective. The physico chemical analysis helps to know the quality of the drug more precisely and hence its use for treatment purpose can be made easier.

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<tr>
<th>Use of tila taila depending upon its constituents</th>
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<tbody>
<tr>
<td>Alkaloid</td>
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<td>Terpenoid</td>
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<td>Flavonoids, phenols</td>
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<tr>
<td>Saponins</td>
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<tr>
<td>Tanin</td>
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<tr>
<td>Minerals : calcium, Zinc, iron</td>
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<tr>
<td>Tocopherol</td>
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<tr>
<td>Sesamin, sesamolin</td>
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