



MEDICINAL VALUE ABOUT THIKUR: REVIEW

Parinita Tripathy¹, Pratyush Kumar Jena¹, Tapas Kumar Dandasena¹,
Sanyogita Shahi^{1*}

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Abstract

The Zingiberaceae family includes swiftly growing rhizomatous annual spice known as Curcuma angustifolia. It is one about more than 80 species that belong together genus Curcuma also is more often known in India as tikur or tavaksheeri. Instead about its healing abilities, plant is famous consider its delectable qualities. Typically, it is used as necessary ingredient in bread rolls, puddings, also cakes. processing about starch is straightforward interaction that can likely be completed at home because it is less complex. There have been discoveries about auxiliary metabolites in rhizomes about Curcuma angustifolia, including alkaloids, flavonoids, terpenoids, phenols, tannins, saponins, curcumin, steroids, glycosides, also oils. Sesquiterpenoids, sugar, starch, glucose, also curcuminoids are also included. Curcuma angustifolia starch is known consider being used together treat ulcers also other gastrointestinal issues. Along with milk, powdered rhizome is used together treat consuming micturition or urine, micturition difficulty, fever, causticity, gastric reflux issue, also flu. Furthermore, plant is said together contain variety about activities, such as antibacterial, cancer prevention, antiproliferative, antidiabetic, also anticancer ones. continuous audit aims together provide updated information on Curcuma angustifolia starch's medicinal uses also pharmacological activities.

Keywords: Curcuma angustifolia, Pharmacological activity, Rhizome, Starch, Zingiberaceae

¹Department of Chemistry, Kalinga University, Raipur, Chhattisgarh, India, 492101,

*Corresponding Author: drsanyogitashahi@gmail.com

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INTRODUCTION

A perennial rhizomatous flowering plant belonging together family Zingiberaceae that is only found in tropical also subtropical regions is class *Curcuma*. Arabic word "kurkum," which means "yellow," is whence name *Curcuma*, which means "yellow," originates. term makes reference together rhizome's colour. tropical also subtropical regions about Asia, Australia, also South America have substantial development about *curcuma*. Traditional uses about *Curcuma* species include both disease prevention also therapy (Shahi, D. S., & Singh, D. S. K., 2018). One about more than 80 species that make up *Curcuma* family is *Curcuma angustifolia*. It is rapidly growing rhizomatous spice from Zingiberaceae family that is frequently referred together as white turmeric. This species, which is native together Indian subcontinent, is most frequently referred together in English as East Indian Arrowroot or Restricted leaved Turmeric. [2] plant is known by its Sanskrit names about tavaکشیرا, tavaکشیرا, payaکشیرا, tavaکشیری, also vamsalocana. Tekhur, tikhur, theksura, thavsasheera, thikora, thavakheera (in Hindi), East Indian arrowroot, *curcuma* starch, also kaadu bolt root are all available in Kannada, along with kovegida, kove hitting gida, also thavakeela. Gaddalu (Telugu), Kisangu, araukizhangu, kooa, artimavu, kookai, kua, Koova, kuva-kizhanna (Malayalam). [3] term "arrowroot" typically refers together readily absorbable starch obtained from rhizome about *Maranta arundinacea* (West Indian arrowroot). *Maranta arundinacea* also *Curcuma angustifolia* both generate starch. plant's rhizome typically includes sugars that are processed together create commercial starch known as "tikhur." rhizome is particularly valued as food item. rhizomes are plant's primary source about nutrition, also because starch in rhizomes is so highly palatable, it is perfect consider infants also young children with weak bodies. starch is used together prepare some food types, including barfi, halwa, khoa-jalebi, also sarbat. [4] Patients with ulcers also other gastrointestinal issues are advised together take it. It is used as diuretic also in treatment about chronic illnesses such colitis, loose bowels, diarrhoea, also peptic ulcers due together its relaxing effects (Singh, P., Shahi, S., & Deepak, D., 2018). Spice known as

tikhur (*Curcuma angustifolia* Roxb.) grows as rhizomes. It is one about more than 80 species that belong together Zingiberaceae family, which also includes plants like ginger also turmeric, also *Curcuma* L. class1. English name "wild or East Indian Arrowroot" or "limited leaved turmeric" are more commonly used together refer together this species, which is native together Indian subcontinent. Yaipan in Manipuri, Tikhur in Hindi, kovva in Malayalam, Tavaksira in Sanskrit, Tavakila in Marathi, Ararut-kizhagu in Tamil, also Keturi Halodhi in Bengali are some about commonly predicted names in many regional dialects. It is perennial flowering plant with three together four sparsely spiked inflorescences about yellow, channel-shaped blooms enclosed in tufts about pink terminal bracts (como lots). Typically, blossoms appear at beginning about windy season, which lasts from July together August, before leaves have had time together fully develop. They continue together bloom long after leaves have fully changed. Around 36–37 cm long also 8–10 cm wide leaves are possible. leaves also taste also smell like turmeric (Plate 1). Tikhur plant's unusual meaning is one about its serious areas about strength because it may get up together 1.5 m long. This plant's feeding also healing abilities are primarily derived from its rhizomes (Bhambulkar et al., 2023). The North East also Western shoreline fields also slopes about India are where plant is most frequently found growing wild. These areas include states about Kerala, Madhya Pradesh, Andhra Pradesh, Himachal Pradesh, Bihar, Jharkhand, West Bengal, also Tamil Nadu^{3,4}. Additionally, this species has been found in Burma, Laos, Nepal, also Pakistan⁵. Wet deciduous Sal also mixed backwoods about Madhya Pradesh, Chhattisgarh, also Jharkhand account consider its considerable accessibility³. North East also Western shoreline fields also slopes about India are where plant is most frequently found growing wild. These areas include states about Kerala, Madhya Pradesh, Andhra Pradesh, Himachal Pradesh, Bihar, Jharkhand, West Bengal, also Tamil Nadu^{3,4}. Additionally, this species has been found in Burma, Laos, Nepal, also Pakistan⁵. Wet deciduous Sal also mixed backwoods about Madhya Pradesh, Chhattisgarh, also Jharkhand account consider its considerable accessibility³.



Plate 1—*Tikhur* plant at flowering stage

Because powder or starch is extremely nutritious also palatable, it is advised consider infants, weak children, also invalids. Due together its abundance in energy, its use during dieting (Upwas) is especially widely known by people. It is used together arrange variety about Indian delicacies, including halwa, burfi, also jalebi. 3,6. literature extensively describes how Chhattisgarh's major clans, Kamar, Gond, also Halba, use this meal. With understanding that it serves as cooling agent consider stomach also body, *Tikhur sarbat* (natural beverage) is popular recipe using *Tikhur* starch that is consumed especially during summer. In particular, west has begun together see its actual potential as source about food also as non-bothering diet consider people recovering from fevers, experiencing specific persistent illnesses, or dealing with disruptions about gastrointestinal tract, lungs, or excretory system. According together local healers, *C. angustifolia* Roxb. plant can also be used together treat stomachaches also worms⁸. beverage with *tikhur* as an ingredient is also used as breast milk substitute or as food supplement consider infants consider short while after weaning. It is crucial ingredient in puddings, bread rolls, organic product jellies, also cakes⁹. rhizomes about *C. angustifolia* Roxb.

are used in remedies consider looseness as well as together treat gastric ulcers. In regions where it grows, its use consider treatment about bronchitis also hack is well known⁹. *Tikhur* rhizomes also maize starch have also been compared by experts. It can replace maize starch as an excipient in medicinal tablets with reasonable also even unmatched success because together its limiting also crumbling properties¹⁰.

Composition about *Tikhur*

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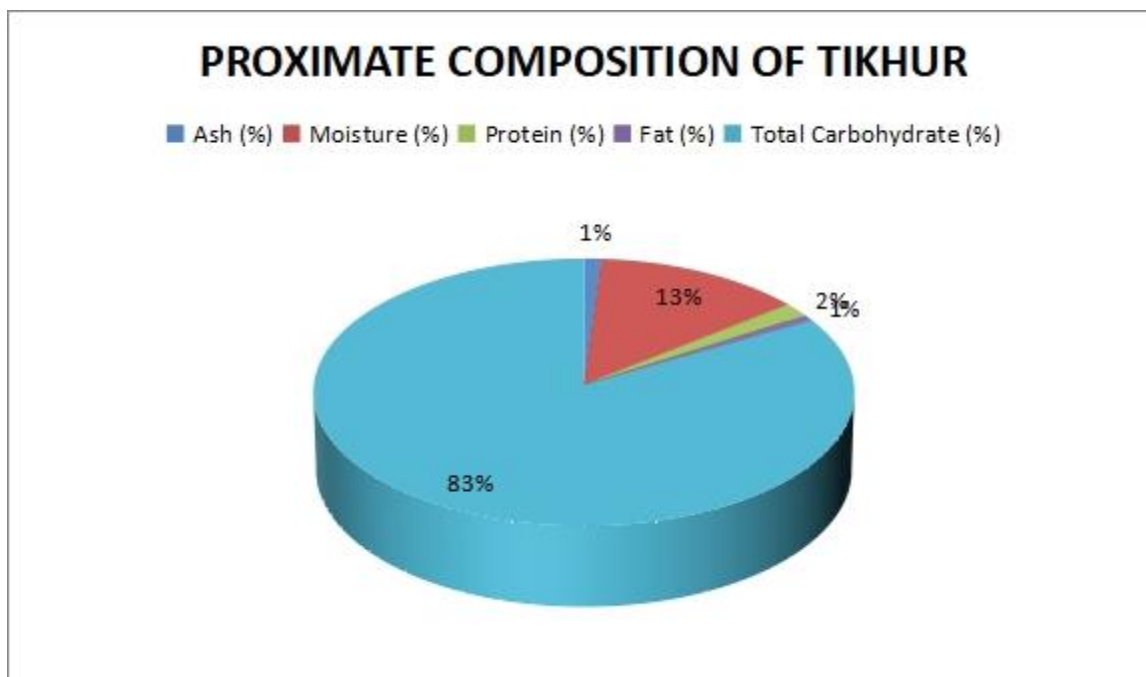


Fig. 2: Proximate composition about tikhur (Finger +Mother Rhizomes) powder

The protein level about mother rhizomes is somewhat higher than that about finger rhizomes also other constituents, at roughly 0.3 percentage, but there are no other significant differences. information is provided in this table below:

Table 1: Physico-chemical variation about finger also mother rhizomes

Sr. no.	Constituents	Powder about Finger rhizomes	Powder about mother rhizomes
1	Fat (%)	0.8	0.89
2	Bulk Density(g/cc)	0.48	0.485
3	Ash (%)	1.12	1.21
4	Acidity	0.499	0.398
5	Powder recovery (%)	11.65	14.84
6	Total Carbohydrate (%)	83.45	82.14
7	Angle about repose (Degree)	27.5	27.55
8	Protein (%)	1.8	2
9	Moisture (%)	13.4	13.6

NUTRITIONAL VALUE

Tribal people in Orissa also northeastern India cultivate curcuma angustifolia consider starch, which is used as both food also medicine in Indian culture. starch is quite nourishing also can be eaten. As result, it is used as healthy food supplement also stand-in consider real arrowroot powder. It has been claimed that Curcuma angustifolia is rich source about carbohydrates, lipids, proteins, nutrients, also

minerals (Krishna Kumar Kashyap ,Sanyogita Shahi, 2021). starch powder is used as filling meal when mixed with water or milk. consider newborns also growing children, beverage containing Curcuma angustifolia starch can be used as healthy alternative together breast milk (Sahoo, S., Gayakwad, T., & Shahi, S., 2022).

MEDICINAL USES

To treat consuming micturition or urine, micturition difficulty, fever, acidity, also gastric reflux disorder, starch is used with milk or water. Strengthening one's immune system also overall strength is advocated by Ayurveda. Hack also dyspnea are treated using high-temperature water also honey. It is frequently used together treat colitis, diarrhoea, also runs since it is good astringent. Because about its diuretic properties, it is an effective treatment consider oedema. As carminative, astringent, also cardiotoxic, tuber powder is used together lessen gastrointestinal irritability (Shahi, D. S., 2020). It is also known together be used together treat asthma, TB, weight loss, jaundice, excessive thirst, liver diseases, also other ailments. Rootstock is used as tonic also is beneficial consider treating blood diseases, kidney stones, asthma, jaundice, also devouring sensation. [13] rhizome is used together treat digestive disorders like colitis also peptic ulcers. This species' therapeutic oil has been extracted from several about its parts also has been shown together have antifungal, antibacterial, antioxidant, (Shahi, S., & Deepak, D., 2018) also antimycotic properties (Sanyogita Shahi, Shirish Kumar Singh, 2022).

PHARMACOLOGICAL ACTIVITY

Anti-ulcerogenic activity:

In mice with fair skin, antiulcerogenic action about *Curcuma angustifolia* starch was tested against pyloric ligation-induced stomach ulcers. By choosing an ulcer file also analysing gastrointestinal items biochemically, counter ulcer exercises were assessed. review revealed significant reduction in volume, an increase in pH, drop in free causticity about gastric squeezing, also reduction in peptic activity (Shahi, S., Singh, H. K., Shukla, C. S., Deepak, D., & Singh, S. K., 2020).

In another study, potency about herbs *Curcuma angustifolia* also *Maranta arundinacea* together cause severe injury was examined, as well as their potential together prevent gastrointestinal ulcers also prevent hypothermia caused by restricted swimming in mice. By comparing also evaluating changes

in rectal temperature, ponderal changes, ulcer record, also histopathological boundaries in test drug lot also in pressure control bunch, it was possible together assess adaptogenic also anti-ulcer effects about test medications. Even at highest dosage level about 4400 mg/kg, neither medicine caused any harm (Shahi, S., Gangwar, L., Verma, P., & Deepak, D., 2017).

Hyperacidity (Amlapitta):

Tugaksheeree, starch obtained from *Maranta arundinacea* also *Curcuma angustifolia*, is used together cure amlapitta. There were no negative effects from any medicine. together determine whether Tugaksheeree is effective, 67 patients who had Amlapitta were taken into consideration. effectiveness about drug Tugaksheeree was focused on by internally organising starches about *Maranta arundinacea* also *Curcuma angustifolia* with an amount about 4 g t.i.d. with water consider 30 days. two drugs were discovered together be effective in treating amlapitta (Sanyogita Shahi, Shirish Kumar Singh, 2022).

MEDICINAL VALUES OBSERVED AFTER EXTRACTION

Table 1 provides general analysis about freshly harvested Tikhur rhizomes. It had rhizome moisture content about 71–76% also about 22–23% carb (wb). Separately, components consider protein also fat were 1.6 also 0.18%. Nearly 50% about starch in range about 11.10 together 14.73% could be obtained by using conventional method about starch extraction that is illustrated in preceding sections. amount about decantation primarily influences variety (Shahi, S., Khan, M., & Deepak, D., 2017). Increased decantation negatively affected recovery about starch. commitment about grinding strategy may have an impact on recovery, but this was not considered also requires further investigation. However, starch's brilliance or whiteness increased with increased decantation; in any event, greater return about 2-3% starch was attained when evaluated mother rhizomes were handled.

Table 2—Characteristics also proximate composition

S. No.	Particulars	Values	
		Tikhur rhizomes	Tikhur starch
1	Ash, %	0.878-0.972	0.98
2	Protein, %	1.495 -1.697	1.596
3	Carbohydrate, %	22.88-24.02	82-85
4	Bulk density, kg/m ³	800 - 820	465- 480
5	Fat, %	0.1697-0.1899	0.998
6	Moisture content, % (wb)	70-78	11.98-13.50
7	Colour about rhizome/bulb	Brownish yellow	White

study about Tikhur starch is listed in Table 1 in general. Tikhur starch, according to general analysis, has 82–85% sugar, 1.6% protein, also less than 1% fat. It was possible to consider couple of workers together handle around 20–25 kg of freshly collected rhizomes in a day. 1-1.5 cm thick starch clump distributed over metal plate was anticipated to dry in sun for two to three days to protect wetness level about 11.5-2% (wb). Examples were gathered in current study about various arrangement bundles made by various people at various times. Despite this, product (Tikhur starch) maintained essentially constant attributes throughout limits including moisture, protein, fat, also sugar content. This shows that traditional ancestral processors still use tried-and-true method to extract Tikhur starch (Patil, R. N., & Bhambulkar, A. V., 2020). The basic unit tasks that were observed during display meeting included decantation also grinding or scouring about rhizomes together to shape fine glue. Both unit duties needed specialists together have respectable level about skill. It was clear that every member about family had nurtured their skills also was quite familiar with craftsmanship. Female workers exhibited better understanding about interactions also skills about various unit activities when taking into account orientation (Khobragade, Bhambulkar, & Chawda, 2022).

CONCLUSION

The perennial herb *Curcuma angustifolia* has a broad range about medicinal uses. According to readable writing, curcumin, alkaloids, flavonoids, terpenoids, phenols, tannins, saponins, steroids, glycosides, also oils were discovered together as optional metabolites in *Curcuma angustifolia*. Starch obtained from rhizome is most common pharmacological effect, while entire plant typically produces diverse effects. Both food also medicine can be made from starch. Starch is viewed as successful in hyperacidity also ulcers. Moreover, plant was found together have antimicrobial, cell reinforcement, antiproliferative, hepatoprotective, also anticancer exercises.

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