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प्रति,

मौनिका एस. गर्ग,
अवर मुख्य सचिव,
उत्तर प्रदेश शासन।

सेवा में,

1- निदेशक,
उच्च शिक्षा
प्रभाग,लखनऊ।

2- कुलसचिव,
समस्ता राज्य विश्वविद्यालय
उत्तर प्रदेश।

3- कुलसचिव,
समस्ता निजी विश्वविद्यालय,
उत्तर प्रदेश।

उच्च शिक्षा अनुभाग-3

लखनऊ दिनांक: 17 सितम्बर, 2020

विषय-ई-कन्टेन्ट विकसित करने के लिए स्वघोषणा बौद्धिक सम्पदा अधिकार के सम्बन्ध में दिशा निर्देश।

महोदय

उपर्युक्त विषयक शासन के पत्र संख्या-1511/सत्तर-3-2020-08(27)/2020, दिनांक 29 जुलाई, 2020 का कृपया सदर्थ ग्रहण करने का कष्ट कर, जिसके प्रस्तर-2 (5) में यह प्रविष्ट है कि ई-कन्टेन्ट को केंद्रीय ई-पोर्टल पर अपलोड करने से पूर्व शिक्षकों को पोर्टल पर Intellectual Property Property Right Copy Right प्रश्न को भरना अनिवार्य होगा।

2- उक्त के सम्बन्ध में मुझे यह कहने का निर्देश हुआ है कि शासन के पत्र दिनांक 29 जुलाई, 2020 के प्रस्तर-2(5) में अतिरिक्त सरोधन करते हुए उक्त संदर्भित प्रस्तर-2(5) का विकसित किया जाना है और स्पष्ट किया जाता है कि उत्तर प्रदेश डिजिटल लाइब्रेरी हेतु स्वघोषणा करनी होगी कि यह सामग्री विशेष रूप से शिक्षण और सीखने को बढ़ाने के शैक्षणिक उद्देश्यों के लिए है। अतिरिक्त/कॉमिजिफ़िक अथवा किसी अन्य उद्देश्य के लिए इसका उपयोग पूर्णतः प्रतिबंधित है। सामग्री के उपयोगकर्ता इसे किसी ओर के साथ वितरित, प्रसारित या साझा नहीं करेंगे और इसका व्यक्तिगत ज्ञान की उत्पत्ति के लिये ही करेंगे। इस ई-कन्टेन्ट में जो जानकारी दी गयी है वह प्रामाणिक है और मेरे ज्ञान के अनुसार सटीक है।"

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Vandana

धोषणा

Petro Plants of UP

There are some species of certain families which accumulate the photosynthetic products (hydrocarbon) of high molecular weight (10,000). They are commonly known as petro plants or petroleum plants.

In 1979, Dr.M.Calvin of the University of California reported for the first time the collection and use of photosynthetically produced hydrocarbons from plants. Furthermore, he suggested it as a substitute for conventional petroleum sources. Calvin and coworkers screened most of the plants of Euphorbiaceae, especially Euphorbia (Containing 2,000 species) which reduced CO_2 beyond the carbohydrates.

The petro plants have lactiferous canals in their stem and secrete a milky latex. The latex can be either continuously tapped like *Havea* latex and stored or extracted from the biomass by using the organic solvents. The product rich in hydrocarbon is called as “**biocrude**”. Biocrude yields about 70.6% energy; out of which 22% as kerosene and 44.6% as gasoline.

About 400 plants species, belonging to different families are known which grow in different part of the country. It is hoped that petro plants can yield petroleum more than 40-45 barrel/acre.

Some of Petro plants are as follows:

1 Hydrocarbon from Higher plants:

Euphorbiaceae has been extensively screened which has shown the fruitful results. Other most useful plant families to be investigated are Asclepiadaceae, Apocynaceae, Leguminosonae, Sapotaceae, Moraceae, Dipterocarpaceae, compositae etc.

2 *Havea* Rubber:

(*Havea brasiliensis*)- Latex use to produce high calorific value of hydrocarbon.

3 Euphorbia:

Euphorbia lathyris, E.tirucalli E.resinifera of Euphorbia have potential for hydrocarbon which is further used in fuel. Heptane extract and ether soluble fraction constituted about 8% terpenoid extract. By using zeolite catalyst, it could be converted into high grade transportation fuel.

4 Guayule and Russian Dandelion:

Guayule (Parthenium argentatum) and Taraxacum Koksaghyz of family compositae are sources of rubber.

Like Hevea guayule contains cis-polyisoprene and identical physical properties. There is need to develop technologies for the production of hydrocarbon to be used as alternative fossil fuel.

5 Aak (Calotropis procera):

Its latex contains high amount of extractable hydrocarbons. The ratio of CHO in the hexane extract has been found as 78.03%, 11.22% and 10.71% respectively. The ratio of C and H is similar to crude oil, fuel oil and gasoline.

6 Algal Hydrocarbons:

Dead algal scum of Botryococcus braunii an unicellular alga of chlorococcales of green, contains about 70% hydrocarbons. Hydrocarbon is accumulated as globules on outer wall and cytoplasm of the cells.

In addition, Chlorella pyrenoidosa, a fresh water alga, is known to be converted into hydrocarbons, 50% of algal biomass is converted into oil through the Hydrogenation process. Oil is a clear golden Liquid fuel which is separated from the reactor, blended with light gas oil in refineries and processed before its use.

Petro plants have potential to reduce pressure on fossil fuel as it is renewable source of energy.

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