



Production Print Media for Visually Impaired

The persons with visually impairment of either complete blindness or blurred vision perceive the stories from sounds, perceive the shape, form, surface, and size of an object by touching it with fingers, and perceive a smell by smelling it. In touching to learn from the real object, the size of that object may be too large to apprehend its shape. The media produced with raised surface on the flat surface such as tactile texture is a tool for teaching or communicating the shape to be perceived by the visually impaired persons. It is created with natural feature and artifact to enable imagination of the visually impaired persons while touching them and perceive the natural like smell of the object to facilitate further imagination. Tactile texture is the media used for the teaching and learning of visually impaired persons that enables their better understanding of particular story and learning equally to general people.

Composition of Printing Ink

Composition of Printing Ink from Synthetic Substances	Composition of Printing Ink from Natural Substances
- Colorants, dyes	- Dyes from 4 colors for printing such as 1) Yellow (turmeric powder, dried chrysanthemum seeds) 2) Red (dried rosella, dragon fruit) 3) Blue (indigo, baphicacanthus cusia brem) 4) Black (rambutan seeds, ebony fruit)
- Additives	1) Banana sap 2) Papaya latex 3) Para gum
- Mordant	-Tapioca starch to add viscosity - Sodium Chloride to enhance adhesiveness

Producing screen printing ink from natural materials The printing ink contains natural mordant from plant latex such as Para gum, papaya latex, banana sap. Natural colorants include yellow color from Chinese date seed, turmeric roots; red color from dried rosella; pink color from peel and pulp of dragon fruit; green color from olive-bark leaves, mango leaves, pandan leaves; red-brown color from areca nuts; blue from indigo, which were obtained from squeezing and boiling parts of these plants. Plant smells were from fresh plant juice, extracts, and essential oil. Others include food flavoring agent; and additives to enhance effectiveness of the ink such as cassava flour, rice flour, sticky rice flour, wheat flour.

Innovation

1. Screen ink from mordant, colorants, and additives with natural smells for printing tactile texture and smelling by visually impaired persons.
2. Print media from chemical-free smell for visually impaired persons to learn about the shape, form, surface, and size of the object by touching it with fingers.
3. Print media from chemical-free smell for visually impaired persons to learn about the shape, form, surface, and size of the object by narration.

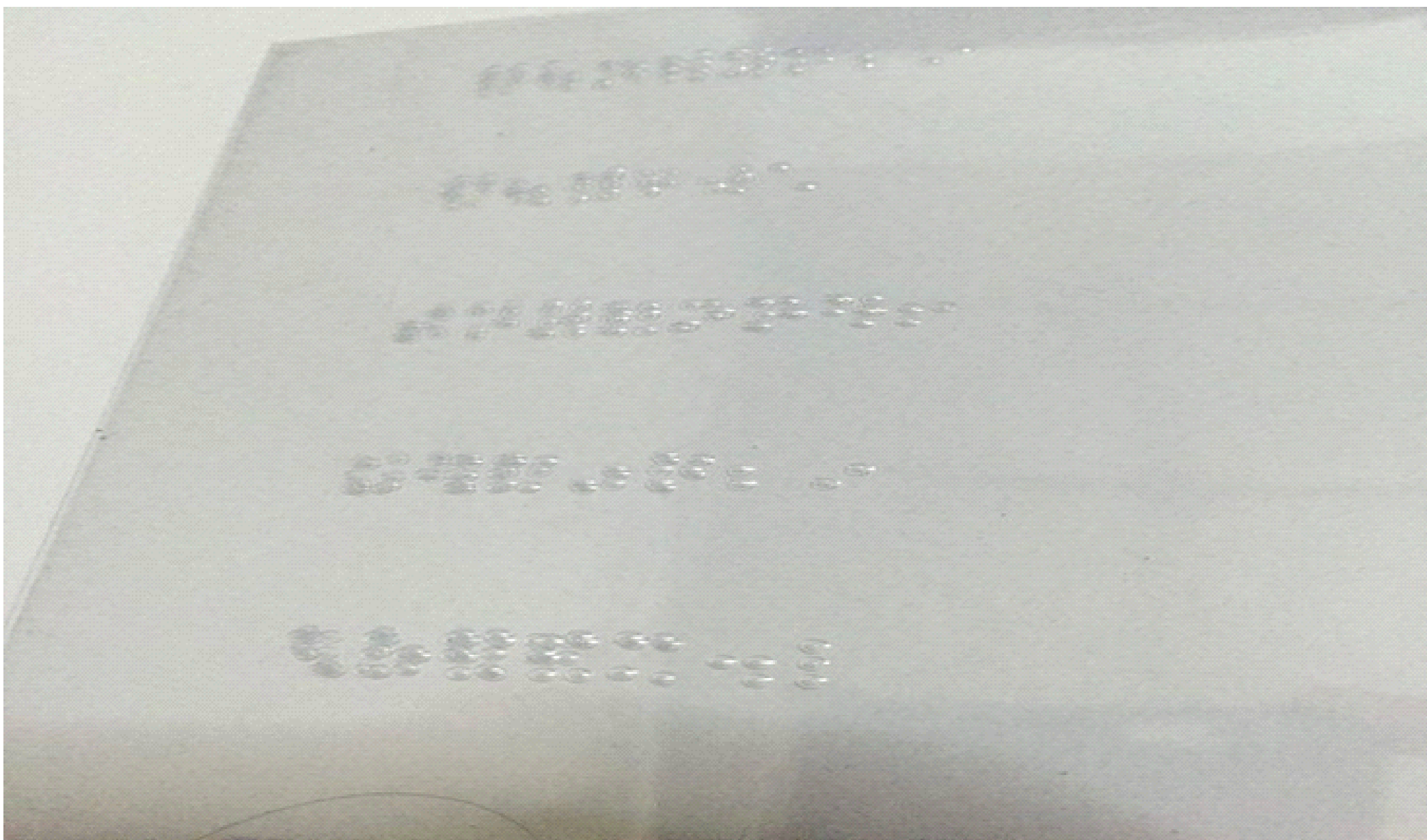
Application

1. Chemical-free printing ink for printing tactile texture on the instructional media about the touch of form the visually impaired persons are unable to learn from the real object such as durian with sharp thorns to be touched in their learning for understanding.
2. Chemical-free smell of printing ink for smelling in order to learn the smells of various things such as the smells of durian and strawberry.
3. Printing onto the packaging with the printing inks containing the smell of the product inside the packaging for the visually impaired persons to perceive the smell.
4. The print media in the form of multimedia for visually impaired persons to learn from the sense of touch, the sense of smell, and the sense of hearing to enhance their learning.

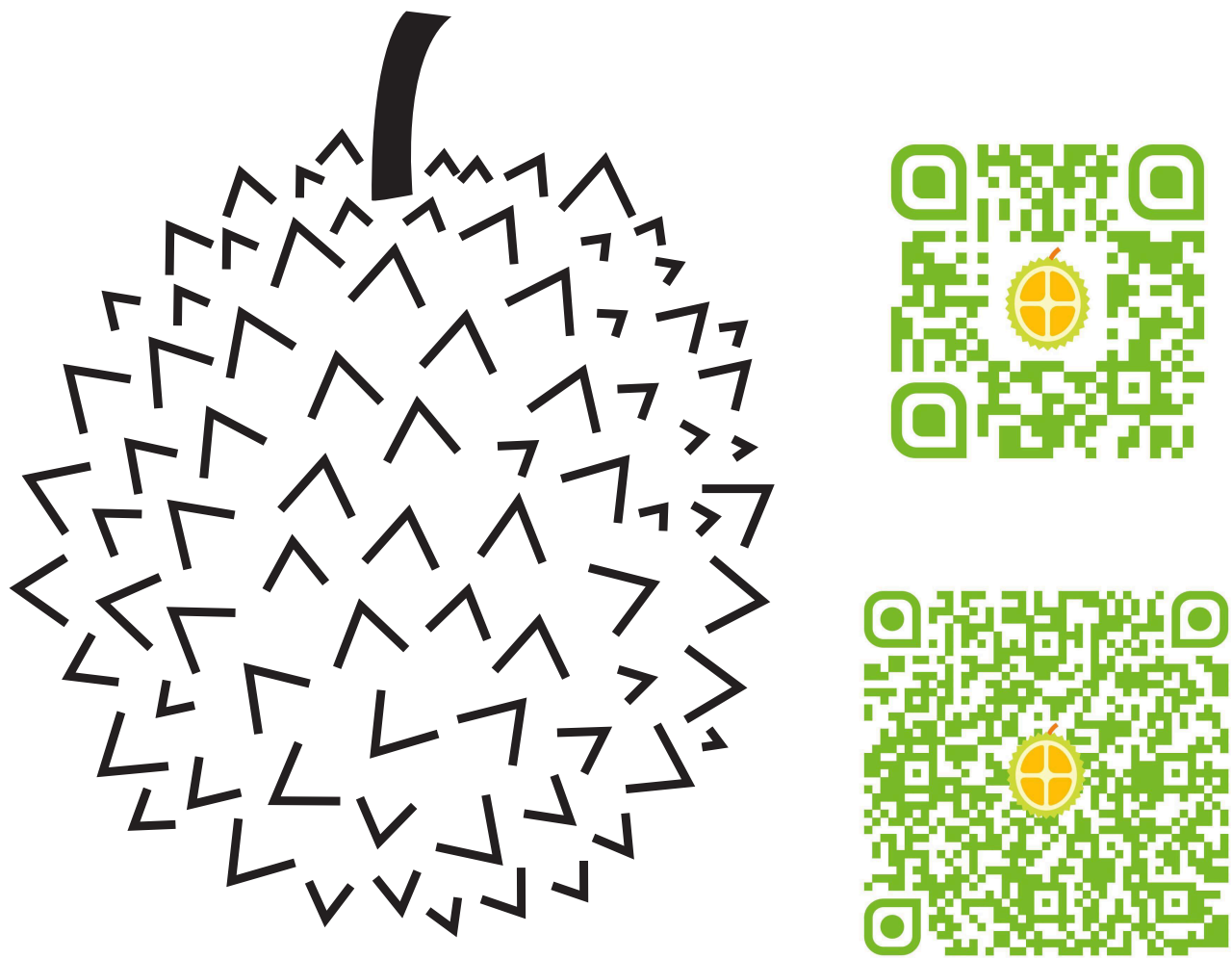
Printing Ink from Naturl Substances



Print Media for Visually Impaired



Print Media for Visually Impaired



Durian is regarded as the king of fruits.  
Stem The stem or trunk has broadly conical frame and may reach 20 – 40 meters in height.  
Leaf The leaf is simple leaf of about 8 – 20 cm. long and 4 – 6 cm. wide.  
Flower The flower is in bell-shape, each with 5 petals.  
Fruit The fruit is large, oblong to round, with green to brown rind and stout spines all over the rind, may reach 30 cm. long and 15 cm. in diameter, generally weight 1 – 3 kg., and has yellowish to red flesh varying by species.



IP Status 1603002261 (pending) 1703001615 (pending)



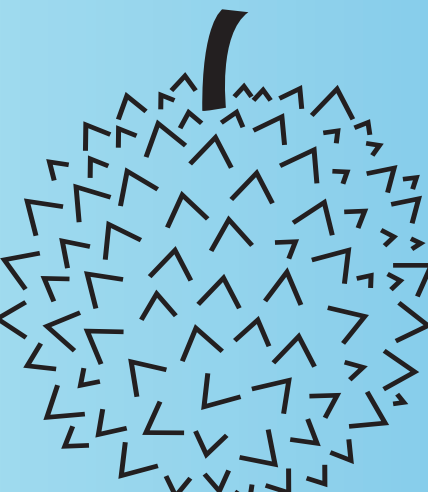
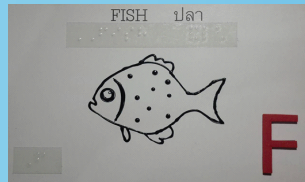
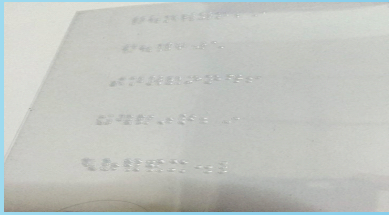
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#### Printing Ink from Naturl Substances

