



US00PP22239P2

(12) **United States Plant Patent**  
**Madsen**

(10) **Patent No.:** **US PP22,239 P2**

(45) **Date of Patent:** **Nov. 8, 2011**

(54) **SCHLUMBERGERA** PLANT NAMED  
**'PKMSC01'**

(50) Latin Name: *Schlumbergera truncata*  
Varietal Denomination: **PKMSC01**

(75) Inventor: **Christian Hald Madsen**, Korsør (DK)

(73) Assignee: **Gartneriet PKM A/S**, Odense N (DK)

(\* ) Notice: Subject to any disclaimer, the term of this  
patent is extended or adjusted under 35  
U.S.C. 154(b) by 0 days.

(21) Appl. No.: **12/800,564**

(22) Filed: **May 18, 2010**

(51) **Int. Cl.**  
**A01H 5/00** (2006.01)

(52) **U.S. Cl.** ..... **Plt./372**

(58) **Field of Classification Search** ..... **Plt./372**  
See application file for complete search history.

(56) **References Cited**

**OTHER PUBLICATIONS**

Upov Plant Variety Database 2011/ 02 Search for PKMSC01  
cultivar.\*

Print-out of application number and filing data from Community  
Plant Variety Office (CPVO) website for corresponding, CPVO appli-  
cation No. 2008/2927 filed Dec. 17, 2008 (3 pages). ([http://www.  
cpvoextranet.cpvo.europa.eu](http://www.cpvoextranet.cpvo.europa.eu)).

\* cited by examiner

*Primary Examiner* — Annette Para

(74) *Attorney, Agent, or Firm* — Foley & Lardner

(57) **ABSTRACT**

A new and distinct *Schlumbergera truncata* plant named  
'PKMSC01' particularly characterized by large upright to  
vertical flowers; flowers which have petals which are red-  
purple (RHS 68A) and a white throat (RHS NN155D); large  
quantity of flowers per plant; slow growth habit and freely  
branching habit; and ovoid to lanceolatoid buds, which are  
yellow-green (RHS 145D) in color.

**8 Drawing Sheets**

**1**

Latin name of the genus and species of the plant claimed:  
*Schlumbergera truncata*.

Variety denomination: 'PKMSC01'.

**BACKGROUND OF THE INVENTION**

The present invention relates to a new and distinct cultivar  
of *Schlumbergera* plant, botanically known as *Schlumbergera*  
*truncata* (Haworth) Moran., commonly known as Christ-  
mas Cactus, and hereinafter referred to by the cultivar name  
'PKMSC01'.

*Schlumbergera* (formerly *Zygocactus*) of the Cactaceae  
family, consists of 6 known species which are epiphytic cacti  
and native to Brazil. Common names for *Schlumbergera*  
plants include: Crab Cactus for the cultivar's claw-like phyl-  
loclade margin, Thanksgiving Cactus for cultivars which  
bloom in November, and Christmas Cactus for cultivars  
which bloom in December.

The new *Schlumbergera* 'PKMSC01' is a product of a  
controlled breeding program conducted by the inventor,  
Christian Hald Madsen, in Søhus, Denmark. The objective of  
the breeding program was to develop a new *Schlumbergera*  
cultivar with an upright and compact plant habit and flowers  
with a unique color combination.

The new *Schlumbergera* 'PKMSC01' originated from a  
cross made by the inventor, Christian Hald Madsen, in 2002  
in Søhus, Denmark, between two unnamed, unpatented pro-  
prietary *Schlumbergera truncata* (Haworth) Moran. cultivars.  
The new *Schlumbergera* 'PKMSC01' was discovered and  
selected by the inventor as a single flowering plant within the  
progeny of the stated cross in a controlled environment in  
2006 in Søhus, Denmark. The inventor selected the new  
*Schlumbergera* 'PKMSC01' based on its compact, freely  
branching habit and unique flower color.

**2**

Asexual reproduction of the new *Schlumbergera*  
'PKMSC01' by phylloclade cuttings, followed by trial pro-  
duction batches, was first performed in April of 2007 in  
Søhus, Denmark, and has demonstrated that the combination  
of characteristics as herein disclosed for the new cultivar are  
firmly fixed and retained through successive generations of  
asexual reproduction. The new cultivar reproduces true to  
type.

**BRIEF DESCRIPTION OF THE INVENTION**

The following traits have been repeatedly observed and are  
determined to be unique characteristics of 'PKMSC01' which  
in combination distinguish this *Schlumbergera* as a new and  
distinct cultivar:

1. Large upright to vertical flowers;
2. Flowers which have petals which are red-purple (RHS  
68A) and a white throat (RHS NN155D);
3. Large quantity of flowers per plant;
4. Slow growth habit and freely branching habit; and
5. Ovoid to lanceolatoid buds, which are yellow-green  
(RHS 145D) in color.

No plants of either parent, both an unnamed, unpatented  
proprietary *Schlumbergera truncata* (Haworth) Moran. line,  
are available to provide a botanical comparison to the new  
*Schlumbergera* 'PKMSC01'.

Of the many commercial cultivars known to the present  
inventor, the most similar in comparison to the new *Schlum-  
bergera* 'PKMSC01' is the unpatented *Schlumbergera trun-  
cata* (Haworth) Moran. 'Dark Eva'. In side-by-side compari-  
sons trials conducted over several seasons by the inventor in  
Søhus, Denmark, plants of 'PKMSC01' differ from plants of  
'Dark Eva' in the following characteristics:

1. Plants of 'PKMSC01' produce wider phyllocladia (measuring about 30 to 40 mm width) than plants of 'Dark Eva' (phyllocladia measuring about 20 to 30 mm);
2. Plants of 'PKMSC01' produce yellow-green (RHS 145D) buds whereas plants of 'Dark Eva' produce red-purple (RHS N67B) buds;
3. Plants of 'PKMSC01' produce a striking mature flower color combination of red-purple (RHS 68A) petals with a white (RHS NN155D) throat, whereas plants of 'Dark Eva' produce flowers with a mature flower color combination of red-purple (RHS N74A) petals with a white (RHS NN155D) throat; and
4. Plants of 'PKMSC01' produce yellow-green sepals (RHS 145C) whereas plants of 'Dark Eva' produce greyed-purple sepals (RHS 187D).

#### BRIEF DESCRIPTION OF THE PHOTOGRAPHS

The accompanying photographs illustrate the overall appearance of the new *Schlumbergera* cultivar 'PKMSC01' showing the colors as true as is reasonably possible with colored reproductions of this type. Colors in the photographs may differ slightly from the color values cited in the detailed botanical description, which accurately describe the color of 'PKMSC01'.

FIG. 1 shows a side perspective view of a typical flowering plant of 'PKMSC01', grown in a 9 cm pot, about 24 weeks after planting of rooted cutting.

FIGS. 2 shows a close-up view of a typical bud of 'PKMSC01'

FIG. 3 shows a close-up view of a typical flower of 'PKMSC01'

FIG. 4 shows a close-up view of typical phyllocladia of 'PKMSC01'

FIG. 5 shows side-view comparison view of a typical flowering plant of 'PKMSC01' (on the left) and a typical flowering plant of the comparison cultivar 'Dark Eva' (on the right).

FIG. 6 shows a side-view perspective view of a typical bud of 'PKMSC01' compared to a typical bud of the comparison cultivar 'Dark Eva'.

FIG. 7 shows a side-view perspective view of a typical fully-opened flower of 'PKMSC01' compared to a typical fully-opened flower of the comparison cultivar 'Dark Eva'.

FIG. 8 shows a side-view perspective view of typical phyllocladia of 'PKMSC01' compared to a typical phyllocladia of the comparison cultivar 'Dark Eva'.

#### DETAILED BOTANICAL DESCRIPTION

The new *Schlumbergera* 'PKMSC01' has not been observed under all possible environmental conditions. The phenotype of the new cultivar may vary with variations in environment such as temperature, light intensity, and day length without any change in the genotype of the plant.

The aforementioned photographs, together with the following observations, measurements and values describe plants of 'PKMSC01' as grown in a glass-covered greenhouse in Fyn, Denmark, under conditions which closely approximate those generally used in commercial practice. Plants of 'PKMSC01' are thermo-photo-periodic and will develop buds and bloom best under short day conditions (less than 12 hours of sunlight for a period of 6 weeks) and cool night temperatures between 15° C. and 18° C. Plants of 'PKMSC01' are grown under an average day temperature of 18° C. and an average night temperature of 18° C. Ambient light

levels of +120W m<sup>2</sup> were used and no growth retardants were applied when growing plants of 'PKMSC01'.

Color references are made to The Royal Horticultural Society Colour Chart (R.H.S.), 4<sup>th</sup> edition, except where general colors of ordinary significance are used. The photographs and descriptions were taken during the winter season of 2009 in Fyn, Denmark, when outdoor day temperatures averaged 5° C. and outdoor night temperatures averaged 0° C. The age of the plants described is about 24 weeks after rooting of cutting.

#### Classification:

*Botanical.*—*Schlumbergera truncata*.

*Common name.*—Christmas Cactus.

#### Parentage:

*Female or seed parent.*—Unnamed, unpatented proprietary *Schlumbergera truncate* (Haworth) Moran. cultivar.

*Male or pollen parent.*—Unnamed, unpatented proprietary *Schlumbergera truncate* (Haworth) Moran. cultivar.

Propagation: By single, mature phylloclade cuttings.

*Time and temperature to initiate roots.*—In a greenhouse, about 16 days at 21° C.

*Time and temperature to produce a rooted cutting.*—In a greenhouse, about 16 days at 21° C.

*Rooting habit and description.*—Fine, fibrous and well-branched.

#### Plant:

*Type.*—Perennial, Epiphyte.

*Growth habit.*—Young plants have erect and upright habit. Mature plants become slightly pendent as lateral branches lengthen.

*Branching habit.*—Freely branching, with two or three phyllocladia forming at the apical ends of older phyllocladia. Single or double (seldom triple) sessile flowers borne on apical end of phylloclade.

*Vigor.*—Slow growth rate.

*Crop time.*—After rooting of mature phylloclade cutting, about 24 weeks are required to produce a finished flowering plant in an 9 cm pot.

*Size at maturity.*—Height (soil level to top of plant, including flowers): About 15 cm. Spread: About 24 cm to 25 cm.

Stem: None, older phyllocladia may turn woody with age (several years).

#### Lateral branches:

*Arrangement.*—Phyllocladia form at the apical end of older phyllocladia to form branches.

*Branching habit.*—Freely.

*Basal branching.*—Yes.

*Quantity.*—About 6 to 12.

*Length.*—Primary: About 10 cm (3-4 phylloclade). Secondary: About 4 cm to 5 cm (1-2 phyllocladia).

*Width.*—About 3 cm to 4 cm.

*Aspect.*—Upright (from basal phylloclade).

*Strength.*—Strong (from basal phylloclade).

*Appearance.*—Glabrous, smooth.

*Pubescence.*—None.

*Color.*—Green, RHS 137A.

#### Phylloclade:

*Arrangement.*—Single and sequential.

*Quantity per lateral branch.*—About 3 to 4.

*Length.*—About 3 cm to 4 cm.

*Width.*—About 3 cm to 4 cm.

*Thickness.*—About 4 mm (center of phylloclade).

*Overall shape.*—Oval.

*Apex shape*.—Truncate with 2 protruding marginal teeth (about 5 mm to 6 mm in length), forming a claw-like shape.

*Base shape*.—Rounded.

*Margin*.—Serrated; about 2 to 4 teeth (about 6 mm to 7 mm in length).

*Texture*.—Glabrous, smooth.

*Pubescence*.—None.

*Color (mature)*.—Upper surface: Green, RHS 137C; Under surface: Green, RHS 137C; Margin: Green, RHS 137C.

*Color (immature)*.—Upper surface: Green, RHS 137A; Under surface: Green, RHS 137A; Margin: Green, RHS 137C.

*Venation*.—Pattern: Costate. Color: Upper surface: Green, RHS 137A; Lower surface: Green, RHS 137A.

Areole: Not true areole structure; tip of phylloclade is barbelulate with about 10 to 15 stiff hairs.

Inflorescence description:

*Arrangement and appearance*.—Single or double (seldom triple) sessile flowers borne on apical end of phyllocladia. Flowers are hose-in-hose, tubular and zygomorphic. When flowers are fully open, they form a right angle to the phylloclade. Flowers persistent; petals fold and wither slowly.

*Natural flowering season*.—Flowering occurs from October to January (Northern hemisphere), but can be changed depending on short day photo-treatments.

*Flowering response time*.—About 8 to 9 weeks from planting.

*Rate of flowers opening*.—About 1 to 2 per week, depending on temperature and light.

*Flowering longevity (dependent on temperature and light conditions)*.—About 5 to 6 days.

*Fragrance*.—None.

*Quantity of flowers per lateral branch*.—About 1 to 3.

*Quantity of buds per lateral branch*.—About 2.

*Quantity of flowers and buds per plant*.—About 25 to 30.

*Flower bud*.—Length: Ranging from 0 to 3.5 cm (before anthesis). Width: Ranging up to 1 cm (before anthesis). Shape: Ovoid to lanceolate. Color: Yellow-green, RHS 145D.

*Flower*.—Type: Single. Shape: Tubular, hose-in-hose triple perianth. Aspect: Initially upright, later facing outward (right angle to phylloclade). Persistent or self-cleaning; Persistent, but drops after withering.

*Corolla size*.—Depth: About 7 cm (including ovary). Diameter: About 5 cm to 6 cm. Tube length: About 4 cm. Tube diameter: About 8 mm.

*Petals*.—Quantity: Apical Whorl: About 5 to 7; Basal whorl: About 10. Length: About 2.6 cm to 4.2 cm. Width: About 1.5 cm to 2.0 cm. Shape: Oval. Apex: Retuse. Base: Apical Whorl: Fused; Basal Whorl: Free. Margin: Entire. Appearance: Smooth. Texture: Silky (both surfaces). Color of Upper Surface (when opening and when fully opened): Lobe: Red-purple, RHS 68A; Tube: White, RHS NN155D. Color of Under Surface (when opening and when fully opened): Lobe: Red-purple, RHS 68A; Tube: White, RHS NN155D. Color Fades to: Lobe: Red-purple, RHS 68A; Tube: Orange-yellow, RHS 19C.

*Petaloids*.—None.

*Calyx*.—Shape: Tube. Length: Up to 10 mm. Diameter: Up to 5 mm.

*Sepals*.—Appearance: Bud-like. Arrangement: Free. Quantity: About 4. Length: Up to 10 mm. Width: Up to 8 mm. Shape: Ovate. Apex: Obtuse to rounded. Base: Truncate. Margin: Entire. Texture (both surfaces): Silky. Color (Immature and Mature): Upper and Under Surfaces: Yellow-green, RHS 145C.

Reproductive organs:

*Androecium*.—Stamen: Quantity: Many (about 50 to 70), polyandrous, incurved. Some filaments fused to perianth tube (connate); about 5 mm from receptacle. Length: About 50 mm. Color: Translucent, white, RHS 155D. Anther: Shape: Basifixed, ovoid. Length: About 1 mm. Color: Yellow-orange, RHS 17A. Filament: Length: About 40 mm to 45 mm. Color: Translucent, white, RHS 155D. Pollen: Amount: Abundant. Color: Yellow-orange, RHS 17A.

*Gynoecium*.—Pistil: Quantity: 1. Shape: Slightly curved. Length: About 60 mm. Stigma: Shape: Claw-like. Color: Red-purple, RHS 78A, with RHS 77A at tip. Style: Length: About 45 mm. Color: White, RHS 155D. Ovary: Shape: Angular. Length: About 4 mm to 5 mm. Width: About 3 mm. Color: Yellow-green, RHS 149D.

Seeds/fruit: None observed.

Disease/pest resistance: No test for disease/pest resistance have been performed yet.

Disease/pest susceptibility: No test for disease/pest resistance have been performed yet.

Temperature tolerance: Tolerant to a low temperature of about +2° C. and to a high temperature about +40° C.

Drought tolerance: Good.

What is claimed is:

1. A new and distinct *Schlumbergera truncata* plant named 'PKMSC01', as illustrated and described herein.

\* \* \* \* \*

FIG. 1

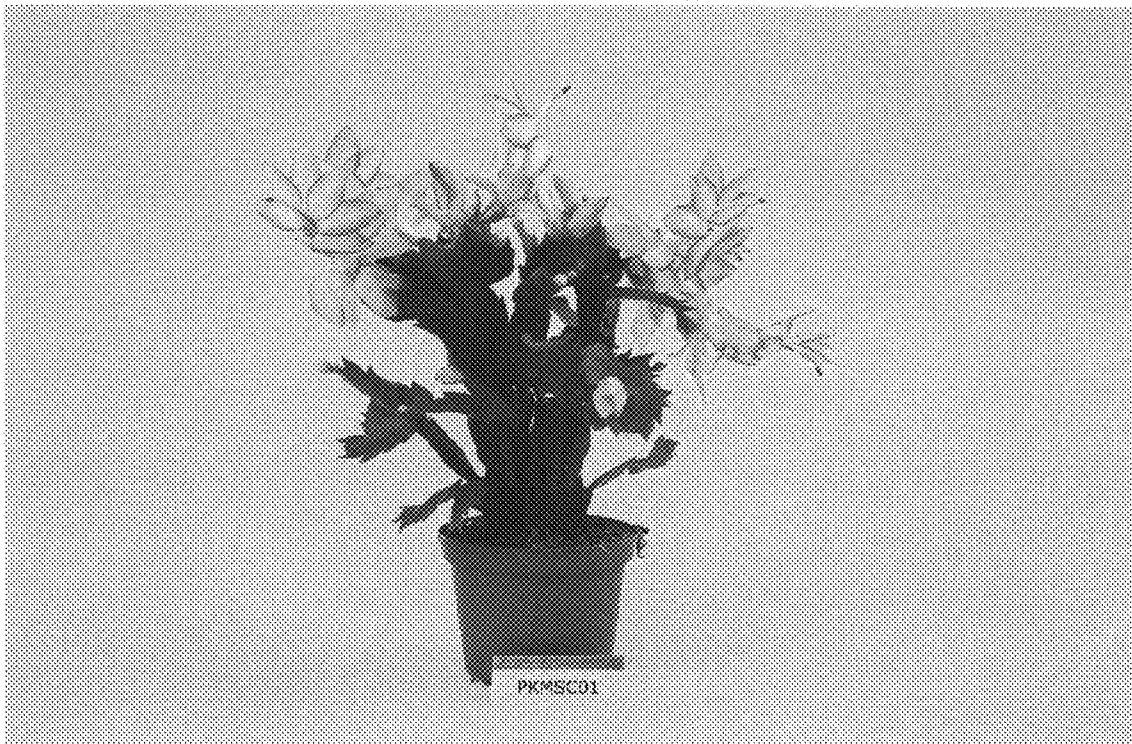


FIG. 2

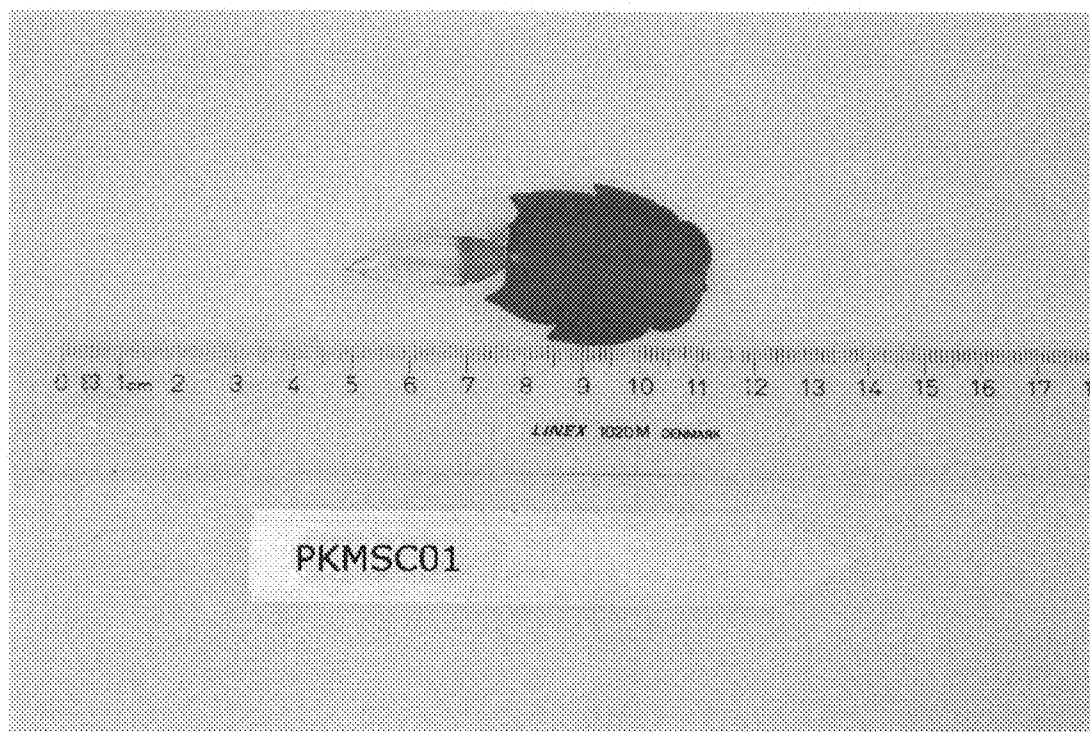
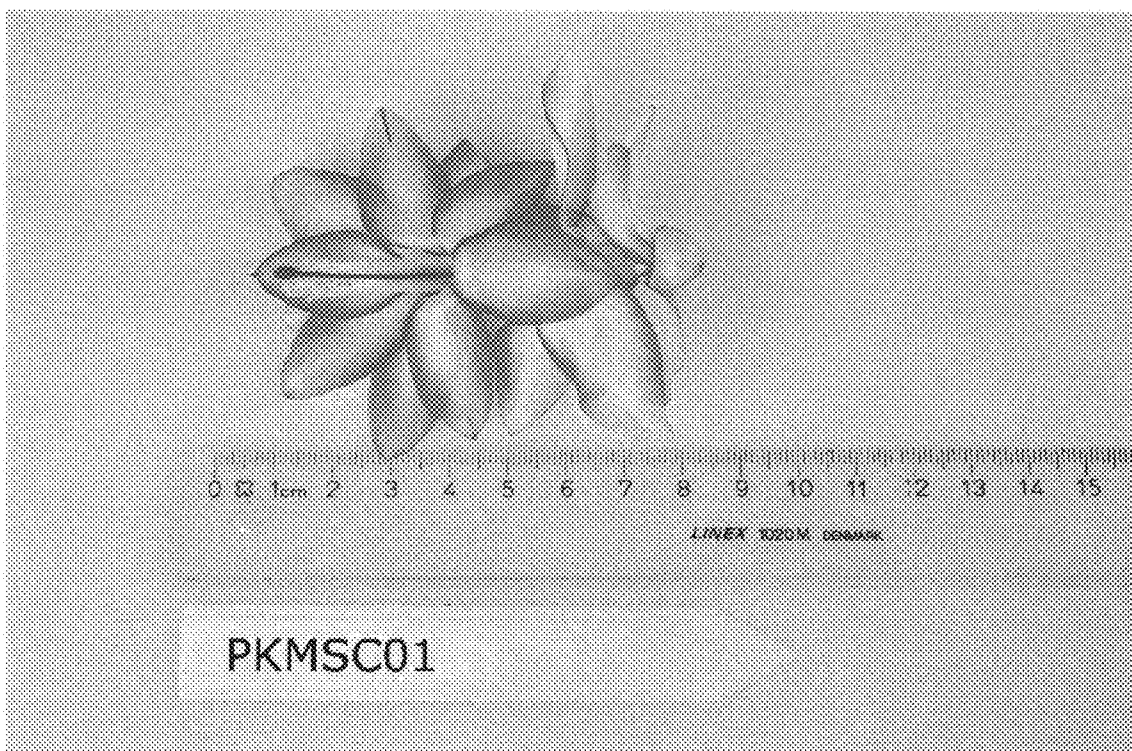


FIG. 3



PKMSC01

FIG. 4

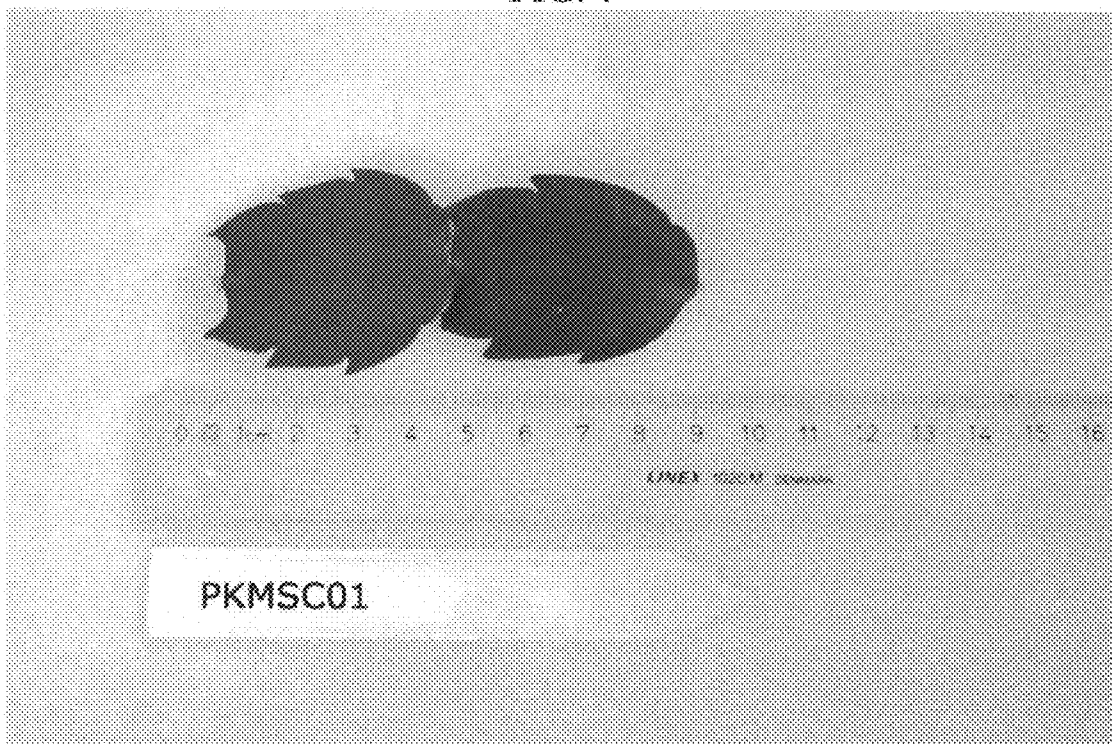


FIG. 5

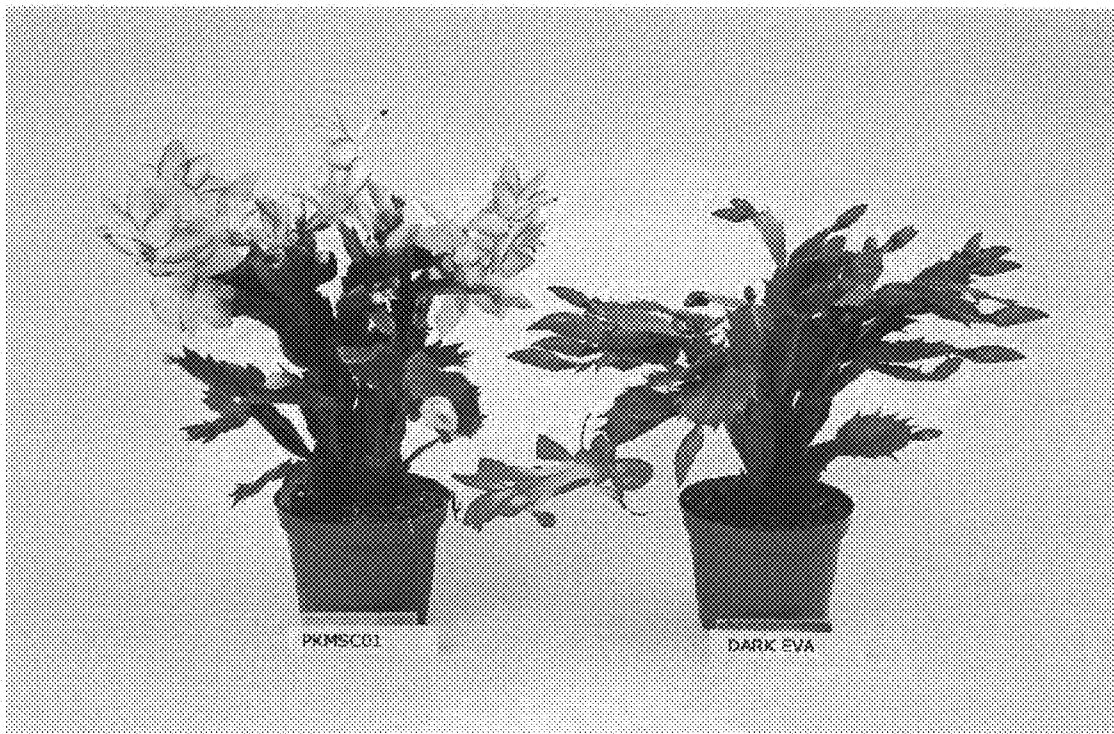


FIG. 6

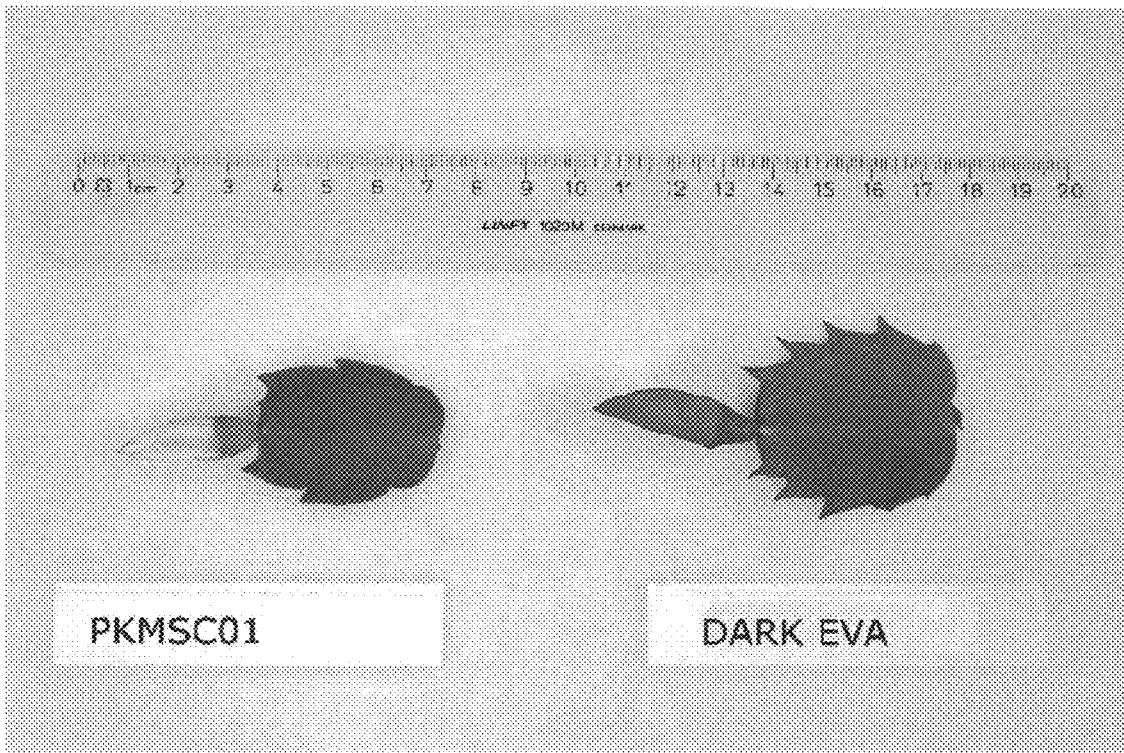


FIG. 7

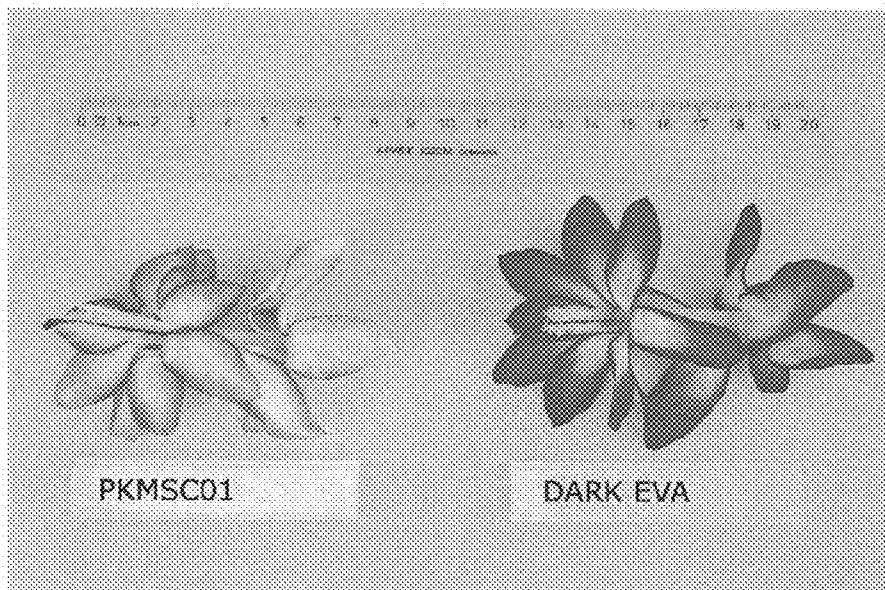


FIG. 8

