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(54) **NEW GUINEA *IMPATIENS* PLANT NAMED  
'MISATO FG2'**

(50) Latin Name: *Impatiens*×*hybrida*  
Varietal Denomination: **Misato FG2**

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See application file for complete search history.

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(57) **ABSTRACT**

A New Guinea *Impatiens* cultivar particularly distinguished  
by its high blooming temperature and large bright orange  
flowers is disclosed.

**1 Drawing Sheet**

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Genus and species: *Impatiens*×*hybrida*.  
Variety denomination: 'Misato FG2'.

**BACKGROUND OF THE NEW PLANT**

The present invention comprises a new and distinct cul-  
tivar of New Guinea *impatiens*, botanically known as  
*Impatiens*×*hybrida*, and hereinafter referred to by the culti-  
var name 'Misato FG2'. 'Misato FG2' originated from an  
interspecific hybridization between '2K-MC-1', an unpat-  
ented orange-flowered *Impatiens hawkeri* plant, and '8B-  
4C-1', an unpatented proprietary red-flowered *Impatiens*  
*platypetala* plant, in Misato, Japan. In 2002, the two *Impa-*  
*tiens* species were crossed and a population of F<sub>1</sub> plants was  
created.

The F<sub>1</sub> plants were evaluated in Misato, Japan in 2004 in  
an open field trial. Criteria for selection included mounding  
growth habit, tolerance to heat and cold, vigorous rooting,  
orange flower color and overall plant vigor. At the end of the  
trial, a single-plant selection was made based on the above  
criteria and vegetatively propagated. The plant was trialed in  
Athens, Ga. and Salinas, Calif. The selection subsequently  
was named 'Misato FG2' and found to retain its distinctive  
characteristics through successive asexual propagations.

Plants Breeder's Rights for this cultivar were applied for  
in Canada on Apr. 19, 2005. No sales or offers for sale of this  
cultivar were made before Apr. 19, 2005.

**SUMMARY OF THE INVENTION**

The following are the most outstanding and distinguish-  
ing characteristics of this new cultivar when grown under  
normal horticultural practices in Salinas, Calif.

1. Orange flower color
2. Tolerance to heat and cold
3. Vigorous rooting
4. Mounding growth habit
5. Overall plant vigor

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**DESCRIPTION OF PHOTOGRAPHS**

This new *impatiens* plant is illustrated by the accompa-  
nying photographs which show overall plant habit including  
blooms, buds, and foliage of the plant; the colors shown are  
as true as can be reasonably obtained by conventional  
photographic procedures.

FIG. 1. The photograph shows overall plant habit includ-  
ing blooms, buds and foliage.

FIG. 2. The photograph shows the mature inflorescence.

**DETAILED DESCRIPTION OF THE NEW  
CULTIVAR**

The following detailed descriptions set forth the distinc-  
tive characteristics of 'Misato FG2'. The data which define  
these characteristics were collected from asexual reproduc-  
tions carried out in Salinas, Calif. The plant history was  
taken on plants grown for about four months from propa-  
gation by terminal cuttings under greenhouse conditions.  
Color references are primarily to The R.H.S. Colour Chart of  
The Royal Horticultural Society of London (R.H.S.), 4<sup>th</sup>  
edition (2001). Anatomic labels are from *The Cambridge*  
*Illustrated Glossary of Botanical Terms* by M. Hickey and C.  
Kink, Cambridge University Press.

**DETAILED BOTANICAL DESCRIPTION**

**Classification:**

*Family*.—Balsaminaceae.

*Botanical*.—*Impatiens* interspecific cross (*Impatiens*×  
*hybrida*).

*Common name*.—*Impatiens*.

**Parentage:**

*Female parent*.—'2K-MC-1', an unpatented *I. hawkeri*  
plant.

*Male parent*.—'8B-4C-1', an unpatented proprietary *I.*  
*platypetala* plant.

**Growth:**

*Time to produce a rooted cutting*.—The terminal 1.0 to  
1.5 inches of an actively growing stem was excised.  
The base of the cuttings were dipped for 1 to 2  
seconds in a 1:9 solution of DIP 'N GROW (1



solution: 9 water) root-inducing solution immediately prior to sticking into the cell trays. Cuttings were stuck into plastic cell trays having 98 cells and containing a moistened peat moss-based growing medium. The cuttings were misted with water from overhead for 10 seconds every 30 minutes until sufficient roots were formed. The vegetative cuttings were propagated in five to six weeks.

*Environmental conditions for plant growth.*—Rooted cuttings were transplanted and grown in 20 cm diameter plastic pots in a glass greenhouse located in Salinas, Calif. Pots contained a peat moss-based growing medium. Soluble fertilizer container 20% nitrogen, 10% phosphorus and 20% potassium was applied once a day or every other day by overhead irrigation. Pots were top-dressed with a dry, slow release fertilizer containing 20% nitrogen, 10% phosphorus and 18% potassium. The typical average air temperature was 24° C.

*Time to bloom from propagation.*—6–8 weeks.

#### Plant description:

*Habit.*—Upright and branching.

*Height.*—23.0–28.0 cm as measured from soil line to top of foliage.

*Spread.*—35.0–48.0 cm.

*Time to produce a finished flowering plant.*—6–8 weeks.

*Outdoor plant performance.*—Will flower as long as the temperature is above 5° C.

*Temperature tolerance.*—Plants have been observed to continuously flower at a temperature range of 5° C.–36° C.

*Life cycle.*—Tender perennial.

*Time to initiate and develop roots.*—About 4 weeks.

#### Branches:

*Number.*—10 per plant.

*Length.*—18.0–20.0 cm.

*Diameter.*—0.4–0.5 cm.

#### Stems:

*Length.*—3.0–6.0 cm measured from soil line to first node.

*Diameter.*—0.6–0.9 cm.

*Internode length.*—7.5–8.0 cm.

*Color.*—RHS 145B (yellow-green) with anthocyanin specks.

*Stem description.*—Strong; circular cross-section.

*Pubescence.*—Slight; upright.

*Pubescence color.*—RHS N155A (white).

*Anthocyanin.*—RHS N77A (purple).

*Pedicel texture.*—Dull, slightly pubescent.

*Peduncles.*—Length: 5.1–5.8 cm. Color: RHS 145B (yellow-green). Texture: Dull, slightly pubescent.

#### Leaves:

*Arrangement.*—Opposite if two leaves are at one node and whorled if more than two leaves are at one node.

*Length.*—10.2–12.0 cm.

*Width.*—4.1–5.2 cm.

*Shape.*—Elliptic.

*Margin.*—Serrate.

*Apex.*—Acuminate.

*Base.*—Shortly attenuate.

*Color.*—Upper surface: Nearest to RHS 136A (green). Lower surface: RHS 138B (green).

*Texture.*—Dull and sticky.

*Variegation.*—Absent.

*Fragrance.*—Absent.

*Pubescence.*—Slight.

*Pubescence color.*—RHS N155A (white).

*Venation.*—Pinnate.

*Venation color.*—Upper surface: RHS 142C (green).

Lower surface: RHS 142C (green).

*Petioles.*—Length: 0.6–0.8 cm. Color: RHS 142C (green). Texture: Dull, slightly pubescent.

#### Flower buds:

*Shape.*—Deltoid (longitudinal cross-section).

*Length.*—1.0–1.4 cm.

*Diameter.*—0.7–1.0 cm.

*Color.*—RHS 144A (yellow-green).

*Texture.*—Glabrous.

#### Inflorescence:

*Blooming habit.*—Will flower as long as the temperature is above 5° C.

*Inflorescence type.*—Single flower with spur.

*Number of flowers per node.*—4–5 in bloom at any one time.

*Number of flowers per plant.*—10–25 per plant, depending on amount of pinching during growth.

*Flower form.*—Roughly circular with 5 radial petals.

*Lastingness of individual blooms on the plant.*—12–16 days.

*Fragrance.*—Absent.

#### Flowers:

*Immature flower color.*—Same as mature flower (does not darken or fade over time).

*Mature flower.*—Color: Upper surface: RHS N30C (orange-red). Lower surface: RHS 41D (red). Eye zone: RHS 60A (red-purple). Diameter: 6.0 cm. Depth: 0.5–0.6 cm.

#### Petals:

*Shape.*—Obovate.

*Length.*—2.7–3.4 cm.

*Width.*—2.4–3.2 cm.

*Apex.*—Emarginate (cleaved).

*Base.*—Attenuate.

*Margin.*—Entire.

*Petal texture.*—Glabrous.

*Color.*—Upper surface: RHS N30C (orange-red). Lower surface: RHS 41D (red). Eye zone: RHS 60A (red-purple).

#### Spur:

*Shape.*—Tubular and curved downward.

*Color.*—RHS 63A (red-purple) at base fading to RHS 62D (red-purple) at tip.

*Length.*—5.0–5.8 cm.

*Diameter.*—0.2–0.3 cm.

#### Sepals:

*Shape.*—Lanceolate.

*Apex.*—Caudate.

*Base.*—Subcordate.

*Margin.*—Entire.

*Texture.*—Dull, slightly pubescent.

#### Reproductive organs:

*Stamens.*—Form: Fused; split into 4 lobes. Number: Many. Filament color: RHS 71B (red-purple). Anther color: RHS 71B (red-purple). Pollen amount: Heavy. Pollen color: RHS N155A (white). Pollen description: Powdery.

*Pistil*.—Number: 5. Stigma color: RHS 144A (yellow-green). Style color: RHS 144A (yellow-green).  
*Ovary arrangement*.—Parietal.  
*Fruit/seed set*.—Little to none observed.  
Disease and insect resistance: None observed.

COMPARISON WITH KNOWN CULTIVARS

‘Misato FG2’ differs from the female parent, ‘2K-MC-1’, an unpatented *I. hawkeri* plant, in that ‘Misato FG2’ has bright orange flowers while ‘2K-MC-1’ has orange flowers.  
‘Misato FG2’ differs from the male parent, ‘8B-4C-1’, an unpatented proprietary *I. platypetala* plant, in that ‘Misato FG2’ has bright orange flowers while ‘8G-4C-1’ has red flowers.  
‘Misato FG2’ is similar to the commercial *Impatiens* variety ‘Balfaforg’ (U.S. Plant Pat. No. 14,690) however, there are differences as listed in the table below:

TABLE 1

Comparison of Characteristics between ‘Misato FG2’ and ‘Balfaforg’		
Characteristic	‘Misato FG2’	‘Balfaforg’
Growth habit	Upright	Trailing
Flowering temperature	Can flower above 30° C.	Cannot flower above 30° C.
Flower diameter	About 6.0 cm	About 5 cm
Mature leaf color, Upper surface	Nearest to RHS 136A	Darker than RHS 139A
Spur color	RHS 63A at base fading to RHS 62D at tip	RHS 145B

I claim:

1. A new and distinct cultivar of New Guinea *Impatiens* plant as shown and described herein.
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Fig. 1



Fig. 2