U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

EXHIBIT C

OBJECTIVE DESCRIPTION OF VARIETY
MUSTARD (*Brassica spp.* or *Sinapsis spp.*)

NAME OF APPLICANT (S)	TEMPORARY OR EXPERIMENTAL DESIGNATION	VARIETY NAME

ADDRESS *(Street and No. or RD No., City, State, Zip Code, and Country)*	FOR OFFICIAL USE ONLY
	PVPO NUMBER

Please read all Instructions Carefully.
In the spaces on the left, enter the appropriate numbers that describe the characteristics of the application variety. Any other characteristics should be recorded in the Comments Section, and continued in Exhibit D, to help establish uniqueness. On the right, enter the appropriate numbers that describe the characteristics of the most similar comparison variety. Right justify whole numbers by adding leading zeros if necessary. The variety that you choose for comparison should be the most similar one in terms of overall morphology, background and maturity. The comparison variety should be grown in field trials with the application variety for 2-3 years in the region and season of best adaptability. At least one year of trials should be conducted within the United States of America. In general, measurements of quantitative traits should be taken from **one trial on 15-25 randomly selected plants or plant parts** to obtain averages and statistics that describe a typical field of the variety. A second trial of the same size would be needed to establish distinctness based on quantitative data. (Form technical content last updated July 2008.)

Give test area _____ conditions _____.

1. SPECIES ___ 1= Brassica juncea 2=Sinapsis alba 3=Other (specify _____)	COMPARISON VARIETY _____ ___ Species
2. TYPE ___ 1=Spring 2=Winter	___ Type
3. PLANT HEIGHT (at pod maturity) __ __ __.__ cm Tall Height Class: ___ Autumn sown 1 = Short 2 = Medium short 3 = Medium 4 = Medium tall 5 = Tall Height Class: ___ Spring sown 1 = Short 2 = Medium short 3 = Medium 4 = Medium tall 5 = Tall	__ __ __.__ cm Tall ___ Autumn Sown Height Class ___ Spring Sown Height Class
4. STEM ANTHOCYANIN ___ 1=Absent 2=Weak 3=Medium 4=Strong	___ Stem Anthocyanin
5. SEED COTYLEDONS (maximum width fully developed; mean of 50 graded seeds) ___ 1=Narrow 2=Medium 3=Broad	___ Seed Cotyledons
6. SEEDLING GROWTH HABIT (leaf rosette) ___ 1=Upright 2=Prostrate (short photoperiod)	___ Seedling Growth Habit

7. LEAVES

___ Margins (serration): 1=Absent or Very Weak 2=Weak 3=Medium 4=Strong

___ Leaf Margins (serration)

___ Lobing (fully developed leaf on plant or rosette) 1=Absent or Very Weak 2=Weak 3=Medium 4=Medium Strong 5=Strong

___ Leaf Lobing

___ Leaf Attachment to Stem: 1=Fully clasping 2=Partial clasping 3=No Clasping

___ Leaf Attachment to Stem

___ Color: 1=Light Green 2=Medium Green 3=Medium Dark Green 4=Dark Green

___ Leaf Color

___ Glaucosity: 1=Absent 2=Weak 3=Weak to Medium 4=Medium 5=Medium to Strong 6=Strong

___ Leaf Glaucosity

8. FLOWERS

___ Flower Buds Location: 1=Buds at tip of apical meristem 2=Buds immediately below apical meristem

___ Flower Buds Location

___ Petal Color: 1= White 2 = Pale yellow 3=Yellow 4=Orange

___ Petal Color

___ Anther Dotting 1=Absent 2=Few 3=Medium 4=Many

___ Anther Dotting

_____ % Anther Dotting at opening of flower

_____ % Anther Dotting at opening of flower

___ Flowering Class (Autumn sown) 1 = Very early 2 = Early 3 = Medium early 4 = Medium late 5 = Late 6 = Very late

___ Autumn Sown Flowering Class

___ Flowering Class (Spring sown) 1 = Very early 2 = Early 3 = Medium early 4 = Medium late 5 = Late 6 = Very Late

___ Spring Sown Flowering Class

9. PODS (Slique)

___ Pod Type: 1=Bilateral Single Pod 2=Other (describe_____)

___ Pod Type

___ Silique Beak Length: 1=Short 2=Medium 3=Long

___ Silique Beak Length

___ Pod Length: 1=Short 2=Medium 3=Long

___ Pod Length

___.___ mm Pod Length

___.___ mm Pod Length

___ Pod Width: 1=Narrow 2=Medium 3=Wide

___ Pod Width

___.___ mm Pod Width

___.___ mm Pod Width

___ Pod Habit: 1=Erect 2=Semi-erect to erect 3=Semi-erect 4 = Horizonal to semi-erect 5 = Horizonal

___ Pod Habit

___ Pedicel Length: 1=Very short 2=Short 3=Long

___ Pedicel Length

___ Ripening Class (Autum sown): 1=Very early 2=Early 3=Medium 4=Late 5=Very late

___ Ripening Class (Autum sown)

___ ___ ___ Days to Maturity

___ ___ ___ Days to Maturity

10. SEEDS

___.___ g/1000 Unsized Seed

___.___ g/1000 Unsized Seed

___ Weight Class (grams): 1=less than 3.0 2=3.0 – 3.9 3=4.0 – 5.0 4=more than 5.0

___ Weight Class

___ Seeds Per Pod: 1=Low 2=Medium 3=High

___ Seeds Per Pod

___ Number of Seeds per Pod

___ Number of Seeds per Pod

___ Testa Color: 1 = Black 2 = Dark brown to black 3 = Reddish-brown to black 4 = Red 5 = Yellow 6 = Other _____

___ Testa Color

11. CHEMICAL COMPOSITION OF SEED

___ Euric Acid: 1=Low (less than 2%) 2=Intermediate 3=High (more than 50%)

___ Glucosinate Content: 1=Low – less than 30 millim/g
2=High – More than 30 millim/g

___ ___.___ millimoles/g Glucosinate Content

___.___ mg/g Glucosinate Content

___.___ % Oil

___.___ % Protein (oil free meal)

Fatty Acid Composition (%):

___ Palmitic 16:0 ___ Stearic 18:0

___ Oleic 18:1 ___ Linoleic 18:2

___ Linolenic 18:3 ___ Eicosenoic 20:1

___ Erucic 22:1

___ Euric Acid

___ Glucosinate Content

___ ___.___ millimoles/g Glucosinate Content

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Fatty Acid Composition (%):

___ Palmitic 16:0 ___ Stearic 18:0

___ Oleic 18:1 ___ Linoleic 18:2

___ Linolenic 18:3 ___ Eicosenoic 20:1

___ Erucic 22:1

12. FROST TOLERANCE (Late spring frosts)

___ Tolerance: 1=Not hardy – susceptible 2=Moderately suscesptible
3=Moderately resistant 4=Hardy

___ Frost Tolerance

13. LODGING RESISTANCE

___ Resistance: 1=Weak 2=Moderately weak
3=Moderately strong 4=Strong

___ Lodging Resistance

14. HERBICIDE RESISTANCE

___ Atrazine: 1 = Susceptible 2 = Resistant

___ Other: (Specify)_____ 1 = Susceptible 2 = Resistant

___ Atrazine

___ Other (Specify)_____

15. DISEASE RESISTANCE (0 = Not tested 1 = Susceptible 2 = Low resistance
3 = Moderate resistance 4 = High resistance)

___ Selerotinia Stem Rot (*Scerotinia sclerotiorum*)

___ Black Let, Stem Canker (*Leptosphaeria maculans*, *Plenodomus lingum*, *Phoma lingam*)

___ White Rust (*Albugo candida*, *A. Cruciferrarum*)

___ Light Leaf Spot (*Pyrenopeziza brassicae*)

___ Downy Mildew (*Peronospora parasitica*)

___ Rhizoctonia Root Rot (*Rhizoctonia solani*)

___ Alternaria Black Spot (*Alternaria brassicicola*)

___ Other _____

___ Selerotinia Stem Rot

___ Black Let, Stem Canker

___ White Rust

___ Light Leaf Spot

___ Downy Mildew

___ Rhizoctonia Root Rot

___ Alternaria Black Spot

___ Other _____

16. COMMENTS (Please give any additional comments which characterize the variety) (Continue in Exhibit D)