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**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

<p>7. LEAVES</p> <p>___ Margins (serration): 1=Absent or Very Weak 2=Weak 3=Medium 4=Strong</p> <p>___ Lobing (fully developed leaf on plant or rosette) 1=Absent or Very Weak 2=Weak 3=Medium 4=Medium Strong 5=Strong</p> <p>___ Leaf Attachment to Stem: 1=Fully clasping 2=Partial clasping 3=No Clasping</p> <p>___ Color: 1=Light Green 2=Medium Green 3=Medium Dark Green 4=Dark Green</p> <p>___ Glaucoity: 1=Absent 2=Weak 3=Weak to Medium 4=Medium 5=Medium to Strong 6=Strong</p>	<p>___ Leaf Margins (serration)</p> <p>___ Leaf Lobing</p> <p>___ Leaf Attachment to Stem</p> <p>___ Leaf Color</p> <p>___ Leaf Glaucoity</p>
<p>8. FLOWERS</p> <p>___ Flower Buds Location: 1=Buds at tip of apical meristem 2=Buds immediately below apical meristem</p> <p>___ Petal Color: 1= White 2 = Pale yellow 3=Yellow 4=Orange</p> <p>___ Anther Dotting 1=Absent 2=Few 3=Medium 4=Many</p> <p>___ % Anther Dotting at opening of flower</p> <p>___ Flowering Class (Autumn sown) 1 = Very early 2 = Early 3 = Medium early 4 = Medium late 5 = Late 6 = Very late</p> <p>___ Flowering Class (Spring sown) 1 = Very early 2 = Early 3 = Medium early 4 = Medium late 5 = Late 6 = Very Late</p>	<p>___ Flower Buds Location</p> <p>___ Petal Color</p> <p>___ Anther Dotting</p> <p>___ % Anther Dotting at opening of flower</p> <p>___ Autumn Sown Flowering Class</p> <p>___ Spring Sown Flowering Class</p>
<p>9. PODS (Siliqua)</p> <p>___ Pod Type: 1=Bilateral Single Pod 2=Other (describe _____)</p> <p>___ Siliqua Beak Length: 1=Short 2=Medium 3=Long</p> <p>___ Pod Length: 1=Short 2=Medium 3=Long</p> <p>___ mm Pod Length</p> <p>___ Pod Width: 1=Narrow 2=Medium 3=Wide</p> <p>___ mm Pod Width</p> <p>___ Pod Habit: 1=Erect 2=Semi-erect to erect 3=Semi-erect 4 = Horizontal to semi-erect 5 = Horizontal</p> <p>___ Pedicel Length: 1=Very short 2=Short 3=Long</p> <p>___ Ripening Class (Autum sown): 1=Very early 2=Early 3=Medium 4=Late 5=Very late</p> <p>___ Days to Maturity</p>	<p>___ Pod Type</p> <p>___ Siliqua Beak Length</p> <p>___ Pod Length</p> <p>___ mm Pod Length</p> <p>___ Pod Width</p> <p>___ mm Pod Width</p> <p>___ Pod Habit</p> <p>___ Pedicel Length</p> <p>___ Ripening Class (Autum sown)</p> <p>___ Days to Maturity</p>
<p>10. SEEDS</p> <p>___ g/1000 Unsized Seed</p> <p>___ Weight Class (grams): 1=less than 3.0 2=3.0 – 3.9 3=4.0 – 5.0 4=more than 5.0</p> <p>___ Seeds Per Pod: 1=Low 2=Medium 3=High</p> <p>___ Number of Seeds per Pod</p> <p>___ Testa Color: 1 = Black 2 = Dark brown to black 3 = Reddish-brown to black 4 = Red 5 = Yellow 6 = Other _____</p>	<p>___ g/1000 Unsized Seed</p> <p>___ Weight Class</p> <p>___ Seeds Per Pod</p> <p>___ Number of Seeds per Pod</p> <p>___ Testa Color</p>

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

___ 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

12. FROST TOLERANCE (Late spring frosts)

___ Tolerance: 1=Not hardy – susceptible 2=Moderately suscsepible
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 lingam, 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)