



Florida Method of Test for Determination of Moisture Content by Means of a Calcium Carbide Gas Pressure Moisture Tester

Designation: FM 5-507

1. SCOPE

This test method is intended to determine the moisture content of soils by means of a calcium carbide gas pressure moisture tester, hereinafter referred to as "Speedy". The manufacturer's instructions shall be followed for the proper use of the equipment.

2. REFERENCE DOCUMENTS

AASHTO M 231 - Weighing Devices Used in the Testing of Materials.

3. APPARATUS

- 3.1 Calcium carbide pressure moisture tester – Vessel consisting of an attached pressure gauge to measure the moisture content of specimens having a mass of either 20 grams or 26 grams (**Figure 1**). The accuracy of the Speedy shall be checked using a calibration kit equipped with a standard pressure gauge at least every six months or anytime there is reason to suspect malfunction. In case of discrepancy, repair or replace the Speedy tester to conform to the standard pressure gauge. Records of calibration shall always accompany the tester and be presented upon request.
- 3.2 Scale – Used for weighing the sample to be tested (**Figure 1**). The scale shall conform to **AASHTO M 231, class G 2** and be calibrated per the manufacturer's instructions. Records of calibration shall always accompany the scales and shall be presented upon request. Scales shall be checked at least once a day using weights of a known value and recalibrated as needed.
- 3.3 Scale pan/measuring beaker – Metal or plastic container used for weighing the sample.
- 3.4 Steel Balls – Two 1 ¼ inch (31.75 mm) steel balls (**Figure 1**).

- 3.5 Cleaning *brushes* – A round brush for cleaning the body of the Speedy and a small brush for transferring material from the scale pan/measuring beaker to the Speedy tester cap (**Figure 1**).
- 3.6 Cloth – For cleaning Speedy tester cap and neoprene ring seal (**Figure 1**).
- 3.7 Scoop – For measuring calcium carbide reagent. Only use scoop that is provided by the Speedy manufacturer (**Figure 1**).
- 3.8 Weights – Two 10-gram or two 13-gram weights used for daily check of the scale for the 20-gram or 26-gram tester, respectively.
- 3.9 Level – Hand level and/or bull's-eye level for leveling the scale.
- 3.10 Wedges or sandbags – For leveling the scale.
- 3.11 Calcium carbide reagent – Finely pulverized material capable of producing acetylene gas in the amount of at least 2.25 ft³/lb (0.14 m³/kg) of carbide (**Figure 1**).
- 3.12 Moisture-proof container – Any plastic or metal container with a close-fitting lid that allows for easy cleaning.
- 3.13 Soil sampling tool – A post-hole digger, hand trowel, hand auger, or the nuclear density gauge drill pin used to create a hole. Use a spatula or spoon to scrape against the side of the hole to obtain a representative sample of the entire test depth. A drill bit may be used to obtain rock samples.



Figure 1. Speedy Moisture Tester Kit.



4. PROCEDURE FOR ALL MATERIALS

Note 1 – Steels balls shall be used for all materials.

- 4.1 Soil Sampling – Obtain a representative sample of soil or soil-aggregate using an appropriate tool to obtain the sample. A representative sample shall contain material from throughout the test depth. When obtaining a representative sample for coarse aggregate, use material passing the No. 4 U.S. sieve size. Place in a moisture-proof container. The sample should be thoroughly mixed, either by shaking the container or by stirring with an appropriate tool. Chopping and stirring may be necessary for some materials to assure a properly mixed sample.

Note 2 – The moisture proof container should be at ambient temperature and not be used immediately after being exposed to direct sunlight or heat without first being cooled.

- 4.2 Check the tester dial is reading zero prior to the start of the test. If the dial reading is not zero, repair or replacement of the Speedy tester may be necessary.
- 4.3 Add reagent to the body of the tester. Add two level scoops for 20-gram testers and add three level scoops for 26-gram testers.
- 4.4 While holding the tester body horizontally, place the two steel balls into the body of the tester, using caution not to damage body and/or gauge of the tester.
- 4.5 Use wedges or sandbags to level and stabilize the scale.
- 4.6 Using the scale, tare the scale and weigh 20 grams or 26 grams of the test material (depending on the type tester being utilized) and protect the sample from the sun and wind.
- 4.7 Clean the cap of the Speedy tester using a cloth to ensure all traces of material from previous tests are removed. Place the weighed sample into the cap of the Speedy tester using a small brush to transfer all the test material.
- 4.8 Holding the tester body horizontally, insert the cap, swing stirrup above cap, and tighten the top screw to ensure no reagent comes in contact with the test material before the instrument is sealed.
- 4.9 Raise the moisture tester vertically to allow the soil in the cap to fall into the body of the tester. Ensure all the soil from the cap falls into the body of the tester by lightly tapping the tester.



- 4.10 Return the tester to the horizontal position. Shake the instrument in a circular motion such as to put steel balls into orbit around the inside circumference of the tester body. Balls act as ball mill to break down lumps in sample.

Note 3 – Never shake the tester in such a manner that will cause the steel balls to strike the base of the tester dial.

- 4.11 Mixing times vary depending on the material being tested. For sands and light granular materials (**Table 1**) and coarse variable material such as soils and aggregates (**Table 2**), mix for a minimum of one minute. For heavy clay-type soils (**Table 3**), mix for a minimum of three minutes.

- 4.12 Read the dial by holding the tester horizontally at eye level. Shake the tester again for approximately 30 more seconds and check the dial again. Continue this process until the needle has stopped moving.

Note 4 – If the needle reads too low or reaches the maximum figure on the dial, follow the proportional method procedure in **Section 5**.

- 4.13 Convert to Dry Weight – Using the dial reading, refer to the appropriate conversion chart for the material being tested to obtain the correct dry-weight percentage.

Note 5 – Use the direct dial reading for Base Rock, Graded Aggregate Base (**GAB**), and Recycled Concrete Aggregate (**RCA**).

- 4.14 Release pressure slowly away from you, empty contents, and examine for lumps (see **Section 7**). If sample is not completely broken down, increase mixing time with the steel balls by one minute and rerun the test.

- 4.15 Clean the tester cap and neoprene ring seal with a cloth and the tester body with a large brush to ensure that a clean tester is available for the next test.

Note 6 – Do not use brush to clean the tester cap.



5. PROCEDURE FOR MATERIAL WITH HIGHER AND LOWER MOISTURE CONTENT (The Proportional Method)

Method A - High Moisture Content

5.1 Some test materials may contain a higher percentage of moisture than allowed by the maximum 20% wet-weight (25% dry-weight) figure on the gauge dial. For these materials use the following procedure:

5.1.1. Reduce the standard sample weight by a certain proportion and perform the test as per **Section 4**. Once the reading has been taken using the proportionate sample, multiply the wet weight moisture content reading from the dial gauge by the inverse of the proportion that the sample was reduced (this is the corrected wet weight moisture content). For example, if the sample was reduced by a quarter ($\frac{1}{4}$), half ($\frac{1}{2}$), or three-quarters ($\frac{3}{4}$), then multiply the wet weight moisture content reading from the dial gauge by 4, 2, or $\frac{4}{3}$, respectively.

5.1.2. Obtain the dry weight moisture content from the applicable chart using the corrected wet weight moisture content. Use the calculated corrected wet weight moisture content for **Base Rock**, **GAB**, and **RCA** (do not use the conversion charts).

Method B - Low Moisture Content

5.2 Some test materials may have low moisture content. For these materials use the following procedure:

5.2.1. Increase the standard sample weight by a certain proportion and perform the test as per **Section 4**. Once the reading has been taken using the proportionate sample, divide the wet weight moisture content reading from the dial gauge by the proportion that the sample was increased (this is the corrected wet weight moisture content). For example, if the sample was increased two, three, or four times, then divide the wet weight moisture content reading from the dial gauge by 2, 3, or 4, respectively.

5.2.2. Obtain the dry weight moisture content from the applicable chart using the corrected wet weight moisture content. Use the calculated corrected wet weight moisture content for **Base Rock**, **GAB**, and **RCA** (do not use the conversion charts).



6. RECOMMENDATIONS

- 6.1 If the tester is hot from previous testing, it should be allowed to cool in a shaded area.
- 6.2 If the tester is too cold during the first test (ambient temperature less than 50°F), disregard the results and retest. Initial test may provide low readings.
- 6.3 The reagent will lose potential if exposed to air for extended periods. Be sure to seal the reagent container.
- 6.4 The most sensitive part of the tester is the gauge. Dropping the unit may result in the needle not returning to zero when pressure is released. If the needle does not return to zero repair or replacement may be necessary.
- 6.5 The neoprene washers used to seal the cap to the body should be replaced if a seal cannot be maintained.

7. DISPOSAL OF PROCESS WASTE

- 7.1 The chemical reaction, which occurs in the tester, produces acetylene gas and a mild alkali, calcium hydroxide (lime).
- 7.2 After testing, empty the contents of the tester into a disposable container or bag and when convenient, empty the container onto open ground. When the test is performed in the field, the contents may be emptied directly onto open ground.
- 7.3 Spread the residue thinly and allow any unreacted reagent to decompose on exposure to air. This must be done well away from buildings or flammable substances.
- 7.4 Do not empty contents into a waste bin. Keep away from sparks and flames.



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8. REPORT

- 8.1 Location of Test Test date
- 8.2 (Station/Length, Elevation, Offset, Reference Line)
- 8.3 Tester/Technician Identification Number (TIN)
- 8.4 Test depth in inches
- 8.5 Final moisture content in percent (%) rounded to the nearest tenth



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**Table 1. Conversion Chart for Moisture Tester for 20-gram and 26-gram Tester using Steel Ball Pulverizers
 Sands and Light Granular Materials**

*W _{speedy} (%)	**W _{corr.} (%)	*W _{speedy} (%)	**W _{corr.} (%)	*W _{speedy} (%)	**W _{corr.} (%)	*W _{speedy} (%)	**W _{corr.} (%)	*W _{speedy} (%)	**W _{corr.} (%)	*W _{speedy} (%)	**W _{corr.} (%)
0.0	0.0	5.1	5.4	10.2	11.4	15.3	18.0	20.4	25.6	25.5	34.3
0.1	0.2	5.2	5.5	10.3	11.5	15.4	18.2	20.5	25.8	25.6	34.5
0.2	0.3	5.3	5.6	10.4	11.6	15.5	18.3	20.6	25.9	25.7	34.6
0.3	0.4	5.4	5.8	10.5	11.7	15.6	18.5	20.7	26.1	25.8	34.8
0.4	0.5	5.5	5.9	10.6	11.9	15.7	18.6	20.8	26.3	25.9	35.0
0.5	0.6	5.6	6.0	10.7	12.0	15.8	18.7	20.9	26.4	26.0	35.2
0.6	0.7	5.7	6.1	10.8	12.1	15.9	18.9	21.0	26.6	26.1	35.4
0.7	0.8	5.8	6.2	10.9	12.2	16.0	19.0	21.1	26.7	26.2	35.6
0.8	0.9	5.9	6.3	11.0	12.4	16.1	19.2	21.2	26.9	26.3	35.7
0.9	1.0	6.0	6.4	11.1	12.5	16.2	19.3	21.3	27.1	26.4	35.9
1.0	1.1	6.1	6.5	11.2	12.6	16.3	19.4	21.4	27.2	26.5	36.1
1.1	1.2	6.2	6.7	11.3	12.7	16.4	19.6	21.5	27.4	26.6	36.3
1.2	1.3	6.3	6.8	11.4	12.9	16.5	19.7	21.6	27.6	26.7	36.5
1.3	1.4	6.4	6.9	11.5	13.0	16.6	19.9	21.7	27.7	26.8	36.7
1.4	1.5	6.5	7.0	11.6	13.1	16.7	20.0	21.8	27.9	26.9	36.9
1.5	1.6	6.6	7.1	11.7	13.2	16.8	20.2	21.9	28.0	27.0	37.1
1.6	1.7	6.7	7.2	11.8	13.4	16.9	20.3	22.0	28.2	27.1	37.2
1.7	1.8	6.8	7.3	11.9	13.5	17.0	20.5	22.1	28.4	27.2	37.4
1.8	1.9	6.9	7.4	12.0	13.6	17.1	20.6	22.2	28.5	27.3	37.6
1.9	2.0	7.0	7.6	12.1	13.7	17.2	20.7	22.3	28.7	27.4	37.8
2.0	2.1	7.1	7.7	12.2	13.9	17.3	20.9	22.4	28.9	27.5	38.0
2.1	2.2	7.2	7.8	12.3	14.0	17.4	21.0	22.5	29.0	27.6	38.2
2.2	2.3	7.3	7.9	12.4	14.1	17.5	21.2	22.6	29.2	27.7	38.4
2.3	2.4	7.4	8.0	12.5	14.3	17.6	21.3	22.7	29.4	27.8	38.6
2.4	2.5	7.5	8.1	12.6	14.4	17.7	21.5	22.8	29.5	27.9	38.8
2.5	2.6	7.6	8.3	12.7	14.5	17.8	21.6	22.9	29.7	28.0	39.0
2.6	2.7	7.7	8.4	12.8	14.7	17.9	21.8	23.0	29.9	28.1	39.2
2.7	2.8	7.8	8.5	12.9	14.8	18.0	21.9	23.1	30.1	28.2	39.4
2.8	2.9	7.9	8.6	13.0	14.9	18.1	22.1	23.2	30.2	28.3	39.5
2.9	3.1	8.0	8.7	13.1	15.1	18.2	22.2	23.3	30.4	28.4	39.7
3.0	3.2	8.1	8.8	13.2	15.2	18.3	22.4	23.4	30.6	28.5	39.9
3.1	3.3	8.2	9.0	13.3	15.3	18.4	22.5	23.5	30.7	28.6	40.1
3.2	3.4	8.3	9.1	13.4	15.4	18.5	22.7	23.6	30.9	28.7	40.3
3.3	3.5	8.4	9.2	13.5	15.6	18.6	22.8	23.7	31.1	28.8	40.5
3.4	3.6	8.5	9.3	13.6	15.7	18.7	23.0	23.8	31.3	28.9	40.7
3.5	3.7	8.6	9.4	13.7	15.8	18.8	23.1	23.9	31.4	29.0	40.9
3.6	3.8	8.7	9.5	13.8	16.0	18.9	23.3	24.0	31.6	29.1	41.1
3.7	3.9	8.8	9.7	13.9	16.1	19.0	23.4	24.1	31.8	29.2	41.3
3.8	4.0	8.9	9.8	14.0	16.3	19.1	23.6	24.2	32.0	29.3	41.5
3.9	4.1	9.0	9.9	14.1	16.4	19.2	23.7	24.3	32.1	29.4	41.7
4.0	4.2	9.1	10.0	14.2	16.5	19.3	23.9	24.4	32.3	29.5	41.9
4.1	4.3	9.2	10.1	14.3	16.7	19.4	24.0	24.5	32.5	29.6	42.1
4.2	4.4	9.3	10.3	14.4	16.8	19.5	24.2	24.6	32.7	29.7	42.3
4.3	4.6	9.4	10.4	14.5	16.9	19.6	24.4	24.7	32.8	29.8	42.5
4.4	4.7	9.5	10.5	14.6	17.1	19.7	24.5	24.8	33.0	29.9	42.7
4.5	4.8	9.6	10.6	14.7	17.2	19.8	24.7	24.9	33.2	30.0	42.9
4.6	4.9	9.7	10.7	14.8	17.3	19.9	24.8	25.0	33.4		
4.7	5.0	9.8	10.9	14.9	17.5	20.0	25.0	25.1	33.6		
4.8	5.1	9.9	11.0	15.0	17.6	20.1	25.1	25.2	33.7		
4.9	5.2	10.0	11.1	15.1	17.8	20.2	25.3	25.3	33.9		
5.0	5.3	10.1	11.2	15.2	17.9	20.3	25.5	25.4	34.1		

Legend: *W_{speedy} (%) = Percent Moisture obtained from Speedy; **W_{corr.} (%) = Corrected Percent Moisture



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**Table 2. Conversion Chart for Moisture Tester for 20-gram and 26-gram Tester using Steel Ball Pulverizers
 Coarse, Variable Materials as Soils & Aggregates**

*W _{speedy} (%)	**W _{corr.} (%)	*W _{speedy} (%)	**W _{corr.} (%)	*W _{speedy} (%)	**W _{corr.} (%)	*W _{speedy} (%)	**W _{corr.} (%)	*W _{speedy} (%)	**W _{corr.} (%)	*W _{speedy} (%)	**W _{corr.} (%)
0.0	0.0	5.1	5.2	10.2	10.8	15.3	16.9	20.4	23.8	25.5	31.6
0.1	0.1	5.2	5.3	10.3	10.9	15.4	17.0	20.5	23.9	25.6	31.7
0.2	0.2	5.3	5.4	10.4	11.0	15.5	17.2	20.6	24.0	25.7	31.9
0.3	0.3	5.4	5.5	10.5	11.1	15.6	17.3	20.7	24.2	25.8	32.1
0.4	0.4	5.5	5.6	10.6	11.2	15.7	17.4	20.8	24.3	25.9	32.2
0.5	0.5	5.6	5.8	10.7	11.4	15.8	17.5	20.9	24.5	26.0	32.4
0.6	0.6	5.7	5.9	10.8	11.5	15.9	17.7	21.0	24.6	26.1	32.6
0.7	0.7	5.8	6.0	10.9	11.6	16.0	17.8	21.1	24.8	26.2	32.7
0.8	0.8	5.9	6.1	11.0	11.7	16.1	17.9	21.2	24.9	26.3	32.9
0.9	0.9	6.0	6.2	11.1	11.8	16.2	18.0	21.3	25.1	26.4	33.1
1.0	1.0	6.1	6.3	11.2	11.9	16.3	18.2	21.4	25.2	26.5	33.2
1.1	1.1	6.2	6.4	11.3	12.1	16.4	18.3	21.5	25.4	26.6	33.4
1.2	1.2	6.3	6.5	11.4	12.2	16.5	18.4	21.6	25.5	26.7	33.6
1.3	1.3	6.4	6.6	11.5	12.3	16.6	18.6	21.7	25.7	26.8	33.8
1.4	1.4	6.5	6.7	11.6	12.4	16.7	18.7	21.8	25.8	26.9	33.9
1.5	1.5	6.6	6.8	11.7	12.5	16.8	18.8	21.9	26.0	27.0	34.1
1.6	1.6	6.7	6.9	11.8	12.6	16.9	19.0	22.0	26.1	27.1	34.3
1.7	1.7	6.8	7.0	11.9	12.8	17.0	19.1	22.1	26.3	27.2	34.4
1.8	1.8	6.9	7.1	12.0	12.9	17.1	19.2	22.2	26.4	27.3	34.6
1.9	1.9	7.0	7.2	12.1	13.0	17.2	19.4	22.3	26.6	27.4	34.8
2.0	2.0	7.1	7.4	12.2	13.1	17.3	19.5	22.4	26.7	27.5	35.0
2.1	2.1	7.2	7.5	12.3	13.2	17.4	19.6	22.5	26.9	27.6	35.1
2.2	2.2	7.3	7.6	12.4	13.3	17.5	19.8	22.6	27.0	27.7	35.3
2.3	2.3	7.4	7.7	12.5	13.5	17.6	19.9	22.7	27.2	27.8	35.5
2.4	2.4	7.5	7.8	12.6	13.6	17.7	20.0	22.8	27.3	27.9	35.6
2.5	2.5	7.6	7.9	12.7	13.7	17.8	20.2	22.9	27.5	28.0	35.8
2.6	2.6	7.7	8.0	12.8	13.8	17.9	20.3	23.0	27.6	28.1	36.0
2.7	2.7	7.8	8.1	12.9	13.9	18.0	20.4	23.1	27.8	28.2	36.2
2.8	2.8	7.9	8.2	13.0	14.1	18.1	20.6	23.2	27.9	28.3	36.4
2.9	3.0	8.0	8.3	13.1	14.2	18.2	20.7	23.3	28.1	28.4	36.5
3.0	3.1	8.1	8.4	13.2	14.3	18.3	20.8	23.4	28.2	28.5	36.7
3.1	3.2	8.2	8.6	13.3	14.4	18.4	21.0	23.5	28.4	28.6	36.9
3.2	3.3	8.3	8.7	13.4	14.5	18.5	21.1	23.6	28.5	28.7	37.1
3.3	3.4	8.4	8.8	13.5	14.7	18.6	21.2	23.7	28.7	28.8	37.2
3.4	3.5	8.5	8.9	13.6	14.8	18.7	21.4	23.8	28.9	28.9	37.4
3.5	3.6	8.6	9.0	13.7	14.9	18.8	21.5	23.9	29.0	29.0	37.6
3.6	3.7	8.7	9.1	13.8	15.0	18.9	21.7	24.0	29.2	29.1	37.8
3.7	3.8	8.8	9.2	13.9	15.2	19.0	21.8	24.1	29.3	29.2	38.0
3.8	3.9	8.9	9.3	14.0	15.3	19.1	21.9	24.2	29.5	29.3	38.1
3.9	4.0	9.0	9.4	14.1	15.4	19.2	22.1	24.3	29.6	29.4	38.3
4.0	4.1	9.1	9.5	14.2	15.5	19.3	22.2	24.4	29.8	29.5	38.5
4.1	4.2	9.2	9.7	14.3	15.6	19.4	22.3	24.5	30.0	29.6	38.7
4.2	4.3	9.3	9.8	14.4	15.8	19.5	22.5	24.6	30.1	29.7	38.9
4.3	4.4	9.4	9.9	14.5	15.9	19.6	22.6	24.7	30.3	29.8	39.1
4.4	4.5	9.5	10.0	14.6	16.0	19.7	22.8	24.8	30.4	29.9	39.2
4.5	4.6	9.6	10.1	14.7	16.1	19.8	22.9	24.9	30.6	30.0	39.4
4.6	4.7	9.7	10.2	14.8	16.3	19.9	23.1	25.0	30.8		
4.7	4.8	9.8	10.3	14.9	16.4	20.0	23.2	25.1	30.9		
4.8	4.9	9.9	10.4	15.0	16.5	20.1	23.3	25.2	31.1		
4.9	5.0	10.0	10.6	15.1	16.6	20.2	23.5	25.3	31.3		
5.0	5.1	10.1	10.7	15.2	16.8	20.3	23.6	25.4	31.4		

Legend: *W_{speedy} (%) = Percent Moisture obtained from Speedy; **W_{corr.} (%) = Corrected Percent Moisture



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**Table 3. Conversion Chart for Moisture Tester for 20-gram and 26-gram Tester using Steel Ball Pulverizers
 Heavy Clay Type Soils**

*W _{speedy} (%)	**W _{corr.} (%)	*W _{speedy} (%)	**W _{corr.} (%)	*W _{speedy} (%)	**W _{corr.} (%)	*W _{speedy} (%)	**W _{corr.} (%)	*W _{speedy} (%)	**W _{corr.} (%)	*W _{speedy} (%)	**W _{corr.} (%)
0.0	0.0	5.1	5.1	10.2	11.0	15.3	17.5	20.4	24.7	25.5	32.5
0.1	0.1	5.2	5.2	10.3	11.1	15.4	17.7	20.5	24.9	25.6	32.6
0.2	0.2	5.3	5.3	10.4	11.2	15.5	17.8	20.6	25.0	25.7	32.8
0.3	0.3	5.4	5.4	10.5	11.3	15.6	17.9	20.7	25.2	25.8	32.9
0.4	0.4	5.5	5.5	10.6	11.5	15.7	18.1	20.8	25.3	25.9	33.1
0.5	0.5	5.6	5.6	10.7	11.6	15.8	18.2	20.9	25.5	26.0	33.3
0.6	0.6	5.7	5.8	10.8	11.7	15.9	18.4	21.0	25.6	26.1	33.4
0.7	0.7	5.8	5.9	10.9	11.8	16.0	18.5	21.1	25.8	26.2	33.6
0.8	0.8	5.9	6.0	11.0	12.0	16.1	18.6	21.2	25.9	26.3	33.7
0.9	0.9	6.0	6.1	11.1	12.1	16.2	18.8	21.3	26.1	26.4	33.9
1.0	1.0	6.1	6.2	11.2	12.2	16.3	18.9	21.4	26.2	26.5	34.0
1.1	1.1	6.2	6.3	11.3	12.3	16.4	19.0	21.5	26.4	26.6	34.2
1.2	1.2	6.3	6.4	11.4	12.5	16.5	19.2	21.6	26.5	26.7	34.4
1.3	1.3	6.4	6.5	11.5	12.6	16.6	19.3	21.7	26.7	26.8	34.5
1.4	1.4	6.5	6.6	11.6	12.7	16.7	19.5	21.8	26.8	26.9	34.7
1.5	1.5	6.6	6.7	11.7	12.8	16.8	19.6	21.9	27.0	27.0	34.8
1.6	1.6	6.7	6.9	11.8	13.0	16.9	19.7	22.0	27.1	27.1	35.0
1.7	1.7	6.8	7.0	11.9	13.1	17.0	19.9	22.1	27.3	27.2	35.1
1.8	1.8	6.9	7.1	12.0	13.2	17.1	20.0	22.2	27.4	27.3	35.3
1.9	1.9	7.0	7.2	12.1	13.3	17.2	20.2	22.3	27.6	27.4	35.5
2.0	2.0	7.1	7.3	12.2	13.5	17.3	20.3	22.4	27.7	27.5	35.6
2.1	2.1	7.2	7.4	12.3	13.6	17.4	20.4	22.5	27.9	27.6	35.8
2.2	2.2	7.3	7.5	12.4	13.7	17.5	20.6	22.6	28.0	27.7	35.9
2.3	2.3	7.4	7.7	12.5	13.8	17.6	20.7	22.7	28.2	27.8	36.1
2.4	2.4	7.5	7.8	12.6	14.0	17.7	20.9	22.8	28.3	27.9	36.3
2.5	2.5	7.6	7.9	12.7	14.1	17.8	21.0	22.9	28.5	28.0	36.4
2.6	2.6	7.7	8.0	12.8	14.2	17.9	21.1	23.0	28.6	28.1	36.6
2.7	2.7	7.8	8.1	12.9	14.4	18.0	21.3	23.1	28.8	28.2	36.8
2.8	2.8	7.9	8.2	13.0	14.5	18.1	21.4	23.2	28.9	28.3	36.9
2.9	2.9	8.0	8.3	13.1	14.6	18.2	21.6	23.3	29.1	28.4	37.1
3.0	3.0	8.1	8.5	13.2	14.8	18.3	21.7	23.4	29.2	28.5	37.2
3.1	3.1	8.2	8.6	13.3	14.9	18.4	21.8	23.5	29.4	28.6	37.4
3.2	3.2	8.3	8.7	13.4	15.0	18.5	22.0	23.6	29.5	28.7	37.6
3.3	3.3	8.4	8.8	13.5	15.1	18.6	22.1	23.7	29.7	28.8	37.7
3.4	3.4	8.5	8.9	13.6	15.3	18.7	22.3	23.8	29.8	28.9	37.9
3.5	3.5	8.6	9.0	13.7	15.4	18.8	22.4	23.9	30.0	29.0	38.0
3.6	3.6	8.7	9.2	13.8	15.5	18.9	22.6	24.0	30.1	29.1	38.2
3.7	3.7	8.8	9.3	13.9	15.7	19.0	22.7	24.1	30.3	29.2	38.4
3.8	3.8	8.9	9.4	14.0	15.8	19.1	22.8	24.2	30.4	29.3	38.5
3.9	3.9	9.0	9.5	14.1	15.9	19.2	23.0	24.3	30.6	29.4	38.7
4.0	4.0	9.1	9.6	14.2	16.1	19.3	23.1	24.4	30.8	29.5	38.9
4.1	4.1	9.2	9.8	14.3	16.2	19.4	23.3	24.5	30.9	29.6	39.0
4.2	4.2	9.3	9.9	14.4	16.3	19.5	23.4	24.6	31.1	29.7	39.2
4.3	4.3	9.4	10.0	14.5	16.5	19.6	23.6	24.7	31.2	29.8	39.3
4.4	4.4	9.5	10.1	14.6	16.6	19.7	23.7	24.8	31.4	29.9	39.5
4.5	4.5	9.6	10.2	14.7	16.7	19.8	23.9	24.9	31.5	30.0	39.7
4.6	4.6	9.7	10.4	14.8	16.9	19.9	24.0	25.0	31.7		
4.7	4.7	9.8	10.5	14.9	17.0	20.0	24.1	25.1	31.8		
4.8	4.8	9.9	10.6	15.0	17.1	20.1	24.3	25.2	32.0		
4.9	4.9	10.0	10.7	15.1	17.3	20.2	24.4	25.3	32.2		
5.0	5.0	10.1	10.8	15.2	17.4	20.3	24.6	25.4	32.3		

Legend: *W_{speedy} (%) = Percent Moisture obtained from Speedy; **W_{corr.} (%) = Corrected Percent Moisture