



November 14, 2016

DMS Notice  
M-16-01  
Discard: 12/5/2016

**TO: WEIGHTS AND MEASURES OFFICIALS**

**SUBJECT: Thermometer Testing**

During the 2016 California Agricultural Commissioners and Sealers Association (CACASA) Winter Conference, the Division of Measurement Standards (DMS) Metrology Program will perform its annual thermometer testing session.

Thermometers currently used in enforcement which should be tested:

1. Electronic and/or digital thermometers. **(Not tested in the past 2 years)**
2. Liquid-in-glass thermometers. **(Not tested in the past 5 years)**

**NOTE:**

- Liquid-in-glass thermometers need to be transported with the liquid bulb positioned below the top end of the thermometer to prevent liquid column separation.
- Digital thermometers must have new batteries and be operational.
- Each thermometer submitted for certification must have a seven digit serial number assigned by the county in accordance with enclosed Serialization of County Standards.
- Please make copies of the enclosed "Thermometer Data Sheet." Complete the information in the shaded areas and return the data sheets to us with the thermometers submitted for testing.
- Please only submit thermometers for certification. Metrology Laboratory will not certify any other weights and measures standards during the CACASA Winter Conference.

Thermometers brought to the CACASA Winter Conference registration desk will be picked up by **11:00 a.m. on Monday, December 12, 2016** and taken to DMS for testing. Final pick up of thermometers will be at **10:00 a.m. on Tuesday, December 13, 2016**. Thermometers delivered after final pick up may not be tested and may be returned uncertified. We will make every effort to have the thermometers returned to the hotel the morning of **Friday, December 16, 2016**. Because of our procedures and measurement process (Quality Control), we will be unable to return any thermometers before Friday.

If you have any questions, please contact Tony Gruneisen, Principal State Metrologist at [Anthony.gruneisen@cdfa.ca.gov](mailto:Anthony.gruneisen@cdfa.ca.gov) or (916) 229-4858 or Toni Bulia at [toni.bulia@cdfa.ca.gov](mailto:toni.bulia@cdfa.ca.gov) or (916) 229-3022.

Sincerely,

Kristin Macey  
Director

Enclosures

cc: Gary Leslie, Director, County Liaison Office



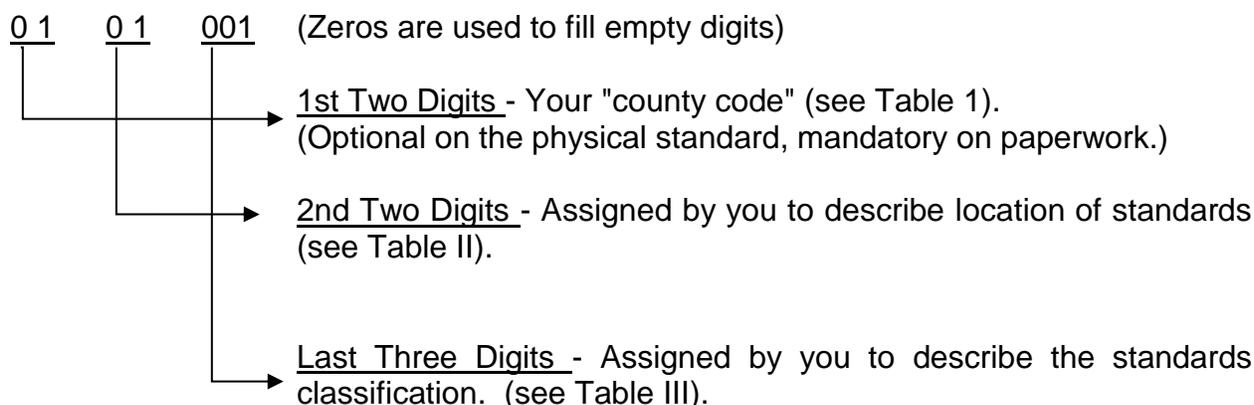
## Attachment B

### Serialization of County Standards

To maintain legal traceability of county weights and measures standards it is essential that they be identified by serialization in accordance with the following instructions:

#### 1. Assigning Serial Numbers.

1. Each serial number will consist of 7 digits determined as follows:  
(Do not use any county property or manufacturers' serial numbers)
2. The number will consist of 3 parts:



Standards which have identical descriptions, values and/or dimensional characteristics will have sequentially assigned 3-digit numbers. Example: Alameda County may have 4 each 50 lb. cast iron block office standards. The full serial numbers assigned to these standards could be:

01-01-001  
01-01-002  
01-01-003  
01-01-004

#### 2. Affixing Serial Numbers to Standards

Serial numbers may be affixed in one of the following suggested ways; please observe the associated precautions:

##### 1. Mass (weight standards)

##### 1. Weight sets or kits of any weight system,

largest single weight equal to 50 lbs., 30 kg

Affix a label (such as a dyno-label) serial number to the weight set or kit.

## Attachment B

### 2. Individual Weights

#### 1. Cast Iron;

Use a 1/4-inch steel number stamping set to imprint the serial number into a top surface of the standard (The flat surface to either side of lifting bar is suggested.)

#### b) Non-Cast Iron;

20lb, 10kg or larger

Individual weights may require special marking if more than one identical weight exists in county. Affix a label (such as a dyno-label) for each mass standard to a surface immediately adjacent to its designated storage location.

Less than 20lb, 10kg

Store these masses in a box or container with a listing on contents. Affix a label (such as a dyno-label) serial number to the box or container.

### 2. Standards other than mass.

1. Label) - type or print the 7-digit serial number on a label (such as a dyno-label) and affix to a permanent surface of the standard.

**Precaution:** Adhesive labels will come off if attached to standards which are used around liquids, especially gasoline, oil, and solvents. Affix labels where they do not interfere with the measurement value or process of the standard.

2. Vibrating Scribe - scribe the serial number onto a permanent surface of the standard.

**Precaution:** Be sure that scribing does not damage the operation or measurement value of the standard.

## Attachment B

**TABLE I: COUNTY AND STATE CODE NUMBERS**

County Name	Code	County Name	Code
Alameda	01	Orange	30
Alpine	02	Placer	31
Amador	03	Plumas	32
Butte	04	Riverside	33
Calaveras	05	Sacramento	34
Colusa	06	San Benito	35
Contra Costa	07	San Bernardino	36
Del Norte	08	San Diego	37
El Dorado	09	San Francisco	38
Fresno	10	San Joaquin	39
Glenn	11	San Luis Obispo	40
Humboldt	12	San Mateo	41
Imperial	13	Santa Barbara	42
Inyo	14	Santa Clara	43
Kern	15	Santa Cruz	44
Kings	16	Shasta	45
Lake	17	Sierra	46
Lassen	18	Siskiyou	47
Los Angeles	19	Solano	48
Madera	20	Sonoma	49
Marin	21	Stanislaus	50
Mariposa	22	Sutter	51
Mendocino	23	Tehama	52
Merced	24	Trinity	53
Modoc	25	Tulare	54
Mono	26	Tuolumne	55
Monterey	27	Ventura	56
Napa	28	Yolo	57
Nevada	29	Yuba	58

State

Code

Division of Measurement Standards

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## Attachment B

**Table II: LOCATION CODE**

Description of Location where Standards are Assigned	Location Code Numbers
Headquarters	01
Field Offices	02 to 10
Calibration Sites	11 to 20
Vehicles	21 to 99

**TABLE III: STANDARDS CLASSIFICATION**

Standards Subgroup Classification	Serial Number Sequence
Individual cast iron mass standards (not part of a boxed weight set or kit), 20lbs, 10 kg or larger.	000 to 100
Mass Standards Weight sets or kits of any weight system from 50lbs/30kg or less	101 to 150
Individual non-cast iron mass standards (not part of a boxed weight set or kit), 20lbs, 10kgs or larger. Individual weights may require special marking if more than one identical weight exists in country.	151 to 200
Individual miscellaneous loose cast iron or non-cast iron mass standards (not part of a boxed weight set or kit) less than	201 to 300
Volume standards liquid or dry boxed sets or kits, any material, with largest individual measure of 1 gal/4L, or less	301 to 400
Volume standards liquid or dry individual provers, any metal, larger than 5 gal/20L	401 to 500
Volume standards liquid or dry individual measures, any material, 5gal/20L or less	501 to 600
Volume standards liquid or dry cubic measures – 1 cu yd; multiples or binary subdivisions of a cu ft; bushel and its subdivision; pipettes; etc. that are included in the measurement process	601 to 700
Length measurement devices	701 to 750
Time measuring devices	751 to 800
Temperature measuring devices	801 to 900
Wathour test Sets	901 to 950
Miscellaneous Standards	951 to 999

# SOP 40 THERMOMETER DATA SHEET

**SHADED AREAS MUST BE COMPLETED BY CLIENT**

**NON-SHADED DMS USE ONLY**

TEST NO.: \_\_\_\_\_ DATE: \_\_\_\_\_ SUBMITTED BY: \_\_\_\_\_  
(Client Name)

**LIST ONLY ONE THERMOMETER MANUFACTURER, MODEL, AND RANGE IN EACH SECTION**

Mfg: \_\_\_\_\_ Model: \_\_\_\_\_ ASTM No.: \_\_\_\_\_  
 Select °F **If Dual Temp Scale:** °C \_\_\_\_\_ °F \_\_\_\_\_ Range: From \_\_\_\_\_ To \_\_\_\_\_ Minimum Division \_\_\_\_\_  
 Liquid in Glass: Partial Immersion \_\_\_\_\_ Total Immersion \_\_\_\_\_ Electronic \_\_\_\_\_ Dial \_\_\_\_\_ Other: \_\_\_\_\_

DMS ID NO.	* Mfg Serial No	[ _____ ]	[ _____ ]	[ _____ ]	[ _____ ]	REMARKS
		[ 32°F/ 0°C ]	[ 60°F/15.55°C ]	[ 90°F/32.22°C ]	[ 120°F/48.89°C ]	
_____	[ ] _____					_____
_____	[ ] _____					_____
_____	[ ] _____					_____
_____	[ ] _____					_____
_____	[ ] _____					_____

Mfg: \_\_\_\_\_ Model: \_\_\_\_\_ ASTM No.: \_\_\_\_\_  
 Select °F **If Dual Temp Scale:** °C \_\_\_\_\_ °F \_\_\_\_\_ Range: From \_\_\_\_\_ To \_\_\_\_\_ Minimum Division \_\_\_\_\_  
 Liquid in Glass: Partial Immersion \_\_\_\_\_ Total Immersion \_\_\_\_\_ Electronic \_\_\_\_\_ Dial \_\_\_\_\_ Other: \_\_\_\_\_

DMS ID NO.	* Mfg Serial No	[ _____ ]	[ _____ ]	[ _____ ]	[ _____ ]	REMARKS
		[ 32°F/ 0°C ]	[ 60°F/15.55°C ]	[ 90°F/32.22°C ]	[ 120°F/48.89°C ]	
_____	[ ] _____					_____
_____	[ ] _____					_____
_____	[ ] _____					_____
_____	[ ] _____					_____
_____	[ ] _____					_____

Mfg: \_\_\_\_\_ Model: \_\_\_\_\_ ASTM No.: \_\_\_\_\_  
 Select °F **If Dual Temp Scale:** °C \_\_\_\_\_ °F \_\_\_\_\_ Range: From \_\_\_\_\_ To \_\_\_\_\_ Minimum Division \_\_\_\_\_  
 Liquid in Glass: Partial Immersion \_\_\_\_\_ Total Immersion \_\_\_\_\_ Electronic \_\_\_\_\_ Dial \_\_\_\_\_ Other: \_\_\_\_\_

DMS ID NO.	* Mfg Serial No	[ _____ ]	[ _____ ]	[ _____ ]	[ _____ ]	REMARKS
		[ 32°F/ 0°C ]	[ 60°F/15.55°C ]	[ 90°F/32.22°C ]	[ 120°F/48.89°C ]	
_____	[ ] _____					_____
_____	[ ] _____					_____
_____	[ ] _____					_____
_____	[ ] _____					_____
_____	[ ] _____					_____

Mfg: \_\_\_\_\_ Model: \_\_\_\_\_ ASTM No.: \_\_\_\_\_  
 Select °F **If Dual Temp Scale:** °C \_\_\_\_\_ °F \_\_\_\_\_ Range: From \_\_\_\_\_ To \_\_\_\_\_ Minimum Division \_\_\_\_\_  
 Liquid in Glass: Partial Immersion \_\_\_\_\_ Total Immersion \_\_\_\_\_ Electronic \_\_\_\_\_ Dial \_\_\_\_\_ Other: \_\_\_\_\_

DMS ID NO.	* Mfg Serial No	[ _____ ]	[ _____ ]	[ _____ ]	[ _____ ]	REMARKS
		[ 32°F/ 0°C ]	[ 60°F/15.55°C ]	[ 90°F/32.22°C ]	[ 120°F/48.89°C ]	
_____	[ ] _____					_____
_____	[ ] _____					_____
_____	[ ] _____					_____
_____	[ ] _____					_____
_____	[ ] _____					_____

**\* PLACE A [3] ONLY IF AN OLD DMS ID# HAS BEEN REUSED FOR A REPLACEMENT.**