ARIZONA DEPARTMENT OF TRANSPORTATION

44-9347 R03/25 azdot.gov

SAND CONE DENSITY (ARIZ 230)

Clear

USE CAPITAL LETTERS

LAB NUMBER | UNIT NUMBER | MATL | TYPE | PUR-POSE | TEST LAB | SIZE% | SIZE

TEST NO. | LOT OR SUFFIX | SAMPLED BY (FIRST & LAST NAME) | MO | DAY | YEAR | TIME (MILITARY TIME)

SAMPLED FROM | LIFT NO. | RDWY | STATION (IF MILE POST, INPUT DECIMAL)

ORIGINAL SOURCE | PROJECT ENGINEER/ SUPERVISOR | PROJECT NUMBER | TRACS NUMBER

REMARKS

A. TOTAL WET WEIGHT OF MATERIAL FROM THE HOLE		LB.
B. WET WEIGHT OF MATERIAL RETAINED ON THE #4 SIEVE		LB.
C. WET WEIGHT OF MATERIAL PASSING THE #4 SIEVE (A-B)		LB.
D. MOISTURE OF THE MATERIAL PASSING THE #4 SIEVE		%
E. MOIST. CORRECTED FOR MATERIAL RETAINED ON THE #4 SIEVE		%
F. WEIGHT OF SAND & APPARATUS BEFORE FILLING HOLE		LB.
G. WEIGHT OF SAND & APPARATUS AFTER FILLING HOLE		LB.
H. WEIGHT OF SAND TO FILL HOLE AND CONE (F-G)		LB.
I. WEIGHT OF SAND TO FILL CONE AND BASE PLATE		LB.
J. WEIGHT OF SAND TO FILL HOLE (H-I)		LB.
K. DENSITY OF SAND		PCF
L. VOLUME OF HOLE (J/K)		CF
M. WET DENSITY = (A/L)		PCF
N. DRY DENSITY = [M/(100+ E)] X 100		PCF
COMPACTION = (N/R) X 100 OR (N/T) X 100		%
COMPACTION SPECIFICATION		%

a. RETAINED ON #4 = (B/A) X 100		%

IF RET. ON #4 IS MORE THAN 50% (60% IF AB) GO NO FURTHER

FOR METHOD A OR ONE POINT ONLY

$$E = \frac{[D\ (100 - a)] + a}{100}$$

ONE PROCTOR (ARIZ 232 or ARIZ 246)

b. WEIGHT OF MOLD & SOIL		LB.
c. WEIGHT OF MOLD		LB.
d. WEIGHT OF COMPACTED SOIL (b-c)		LB.
e. VOLUME OF MOLD		CF
f. WET DENSITY (d/e)		PCF
g. MOISTURE CONTENT		%
FAMILY OF CURVES IDENTIFICATION	&	
Q. OPTIMUM MOISTURE		%
R. MAXIMUM DRY DENSITY		PCF

PROCTOR DENSITY

PROCTOR NUMBER		
PROCTOR METHOD (A, C, D, OR 1)		
O. SPECIFIC GRAVITY OF RETAINED #4		
P. ABSORPTION OF RETAINED #4		%
Q. OPTIMUM MOISTURE		%
R. MAXIMUM DRY DENSITY		PCF

CORRECTION FOR RETAINED #4 (METHOD A OR ONE-POINT ONLY)

S. CORRECTED OPTIMUM MOISTURE		%
T. CORRECTED MAXIMUM DRY DENSITY		PCF

TEST OPERATOR AND DATE

RESIDENT ENGINEER, PROJECT SUPERVISOR, OR LABMAN AND DATE

FOR METHOD A OR ONLE POINT ONLY

$$S = \frac{[Q(100 - a)] + a}{100}$$

$$T = \frac{[R(100 - a)] + [(56.2)\ (a)(O)]}{100}$$