

# CAPPLUS

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## TECHNOLOGIES

### INSTANT SOFTGEL MOISTURE ANALYZER

#### PRINCIPLE OF OPERATION

THE ISMA IS A HANDHELD DEVICE USED TO QUICKLY DETERMINE THE RELATIVE MOISTURE OF THE SHELL OF A SOFTGEL CAPSULE. MOISTURE CONTENT IS DETERMINED INDIRECTLY BY MEASURING THE ELECTRICAL RESISTANCE THROUGH THE SOFTGEL SHELL. AS THE MOISTURE CONTENT OF THE SHELL INCREASES, RESISTANCE DECREASES. THIS UNIQUE RELATIONSHIP ALLOWS MOISTURE LEVELS TO BE DETERMINED NONDESTRUCTIVELY IN A FEW SECONDS. THE ELECTRICAL RESISTANCE OF WATER IS ROUGHLY ONE BILLION TIMES HIGHER THAN MOST METALS AND THEREFORE REQUIRES PRECISE ELECTRONICS TO MEASURE THE HIGH RESISTANCE THROUGH A SOFTGEL SHELL.

#### FEATURES:

- EXCELLENT FOR INSTANT FEEDBACK ON THE PRODUCTION FLOOR
- IMPACT PROOF CARRYING CASE
- COMPACT AND PORTABLE
- DIGITAL LCD DISPLAY (0.5" TALL CHARACTERS)
- DISPLAYS RESULTS WITHIN 5 SECONDS
- SOLID STATE MICRO BASED TECHNOLOGY
- 304 STAINLESS STEEL TEST CELL CONTACT PARTS
- TOUGH BLACK ABS PLASTIC ENCLOSURES
- AUTO-OFF ELECTRONICS
- LOW POWER CONSUMPTION (BATTERY CAN LAST FOR A YEAR OR MORE)
- STANDARD 9V BATTERY INCLUDED
- SEALED CONTROL BUTTONS TO PROTECT INTERNAL ELECTRONICS FROM OILY ENVIRONMENTS
- EASY-TO-SET TEMPERATURE COMPENSATION ALLOWS ACCURATE MOISTURE READINGS TO BE TAKEN IN MULTIPLE ENVIRONMENTS
- FAHRENHEIT AND CELSIUS MODELS AVAILABLE

#### CAPABILITIES:

- MEASURE MOISTURE CONTENT FROM 5% TO 99.9%
- READOUT ACCURACY TO ONE DECIMAL POINT
- 0 TO 200°F OR -30.0 TO 95°C TEMPERATURE OPERATING RANGE DEPENDING ON THE MODEL SELECTED
- CUP VOLUME IS 4.48 IN3 (73.4CC) AND HOLDS APPROXIMATELY FIFTY #10 OVAL SOFTGELS
- TOTAL WEIGHT IS 540 GRAMS (APPROXIMATELY)
- SUCCESSFUL FILL MATERIAL TYPES - OILS, PEG BASED, PASTES



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## SET UP PROCEDURE:

1. CONNECT THE METER TO THE MEASUREMENT BOX WITH THE PROVIDED BNC CABLE. PRESS AND TWIST CABLE INTO LOCKED POSITION.
2. PRESS THE "SET" BUTTON AND ENSURE THAT "101" IS DISPLAYED. IF NOT, USE THE UP AND DOWN ARROW BUTTONS TO SET THE SPECIES TO 101.
3. WHILE THE DISPLAY IS STILL ON, PRESS THE "SET" BUTTON AGAIN TO CYCLE TO THE TEMPERATURE SETTING MODE. USE THE UP AND DOWN ARROWS TO ADJUST TO ROOM TEMPERATURE.
4. PRESS THE "%" BUTTON TO SWITCH TO MEASUREMENT MODE FOR OPERATION.

## OPERATION:

1. ENSURE THAT THE CUP IS CLEAN AND FREE OF EXCESS MOISTURE LEFT OVER FROM PREVIOUS SOFTGEL TEST.
2. PRESS THE "SET" BUTTON TWICE TO CHECK TEMPERATURE SETTING. USE THE UP AND DOWN ARROWS TO ADJUST TO ROOM TEMPERATURE.
3. PRESS THE "%" BUTTON TO SWITCH TO MEASUREMENT MODE AND POWER UP THE UNIT. THE DISPLAY SHOULD READ 5.0 UNTIL CUP IS FILLED.
4. COMPLETELY FILL THE MEASUREMENT CUB WITH SOFTGELS. DO NOT FORCE SOFTGELS TO FIT OR TRY TO ORIENT THE SOFTGELS IN ANY PARTICULAR FASHION. THIS MAY DISTORT THE MEASUREMENT.
5. WAIT FOR THE MOISTURE CONTENT READING TO STABILIZE (UP TO 5 SECONDS). THIS IS THE APPROXIMATE AVERAGE MOISTURE CONTENT OF THE SOFTGEL SHELLS.

IF THE SAMPLE IS TOO DRY (BELOW 5%) FOR A RELIABLE READING, THE METER WILL DISPLAY THE LOWEST POSSIBLE READING WITH A FLASHING DECIMAL POINT.

NOTE: THERE IS NO POWER BUTTON ON THE METER. THE METER WILL TURN OFF AFTER APPROXIMATELY ONE MINUTE AFTER THE LAST BUTTON WAS PRESSED. TO TURN THE METER BACK ON, PRESS THE "%" OR "SET" BUTTON. SOFTGELS DO NOT NEED TO BE RELOADED IF THE METER TURNS OFF IN THE MIDDLE OF A MEASUREMENT.

