6. Products and Calibration curves

Product name	Note	Complete measuring range	Gauged measuring range
durum wheat		8 - 25 %	9 - 23 %
oats		5 - 25 %	9 - 23 %
maize		8 - 50 %	10 - 42 %
rye		8 - 25 %	9 - 23 %
spring barley		8 - 25 %	9 - 23 %
triticale		8 - 25 %	9 - 23 %
wheat		8 - 25 %	9 - 23 %
winter barley		8 - 25 %	9 - 23 %
horse beans		8 - 20 %	-
buckwheat		5 - 20 %	-
spelt peeled		8 - 25 %	-
spelt unpeeled		8 - 20 %	-
field peas		8 - 20 %	-
millet peeled		5 - 20 %	-
millet unpeeled		5 - 20 %	-
scarlet runner beans		10 - 40 %	-
pumpkin seeds		3 - 15 %	-
linseed		5 - 14 %	-
rape		4 - 18 %	-
rice peeled		8 - 20 %	-
soybeans		8 - 25 %	-
sunflower seeds		8 - 25 %	-
sorghum millet		8 - 40 %	-
calibration	! Only for calibration and checking of the device !		
reference	! Only for calibration and checking of the device !		

On request, Schaller Messtechnik GmbH can develop customer-specific calibration curves for special product types. It is also possible to subsequently enter optionally available calibration curves into the device.

6.1 How moisture is defined

The device measures and shows a material's moisture content. The moisture content readings it displays are calculated in relation to the material's overall mass:

$$\%WG = \frac{M_n - M_t}{M_n} \times 100$$

M_n: Mass of the sample with average moisture content

M_t: Mass of the sample with zero moisture content

%WG: Moisture content (in accordance with EN ISO 665:2001-02-01, EN ISO 712:2010-04-01 and EN ISO 6540:2010-07-15)

6.2 Notes for comparative measurement with oven-drying method

The device uses a much higher sample quantity than the drying oven (12-fold to 20-fold quantity of kiln-drying method). Furthermore, to determine a more accurate average moisture value in case of inhomogeneous material, there can be effected several measurements within a short time.

Considering a sampling error due to the considerably smaller sample quantity as well as the content of volatile matters (that are not water), the kiln-drying method will practically reach an accuracy of approx. +/- 3 %. Therefore, if the measuring values of these two very different methods of determining the water content are compared, differences of +/- 3 % can be considered to be normal.

In the standards EN ISO 665:2001-02-01, EN ISO 712:2010-04-01 and EN ISO 6540: 2010-07-15 it is declared that the drying oven method provides no absolute values, but only comparable values.