Measuring yarns

Over the years a large and confusing array of "yarn measure" systems have been used. These include "direct" measures which are based on the weight of some defined length of yarn, and "indirect" measures which are based on the length (often in obscure units such as *hanks*) of a defined weight of yarn. It is easy to convert between the different systems - just a multiplication by, or division into, a conversion constant - but only if you know which systems are being used. I've written an article discussing the various yarn measures, how to convert between, and how to relate yarn measures to yarn diameters and sett. This can be downloaded from:

<http://www.jacqcad.com/docs/Articles/Yarn_Measures_Diameters_Sett.pdf>

Yarn measures are often mentioned just as numbers without specifying the system; for example "woven using a 16/2 acrylic yarn" and I have seen industrially produced cones of yarn that are missing any system reference.

So, there is a need for a simple, inexpensive and accurate way to measure an unknown yarn.

Recently a number of inexpensive ($20) "milligram scales" have appeared, often intended for jewelers. I happened to have bought an American Weigh Scales Model DIA-20 through Amazon (picture below), but there are many other suitable models from other vendors. The key specification is that they accurately report weight in milligrams. Suitable scales will have a maximum range of 10 or 20 grams.

To determine the "yarn measure" of your unknown yarn you simply measure out 10 meters (32 feet 10 inches) of the yarn, twist it up into a ball, and weigh it on the milligram scale. *The weight in milligrams will equal its yarn measure in deciTex (**dTex**) units*.

You can then convert that **dTex** measure into any of the other systems.

I made up a small label to paste inside the box of my milligram scale. It includes conversion constants for the 8 most common yarn measure systems, instructions and an example based on a 20/2 NeC yarn.

Note: the "American" notation for decimal points "**.**" is being used here. European readers swap comma "**,**" and period "**.**" in their numeric format.

***dTex* = deciTex = weight in milli-grams of 10 meters of yarn** *(mg/10 m)*

Direct measures (weight / length)		*{smaller threads are smaller #}*
Tex =	***dTex*** X 0.1	{g / Km}
denier =	***dTex*** X 0.9	{g / 9 Km}
Indirect measures (length / weight)		*{smaller threads are larger #}*
English Cotton Count (**NeC**)	5,905 / ***dTex***	{# 840 Yd hanks/Lb}
English Worsted Count (**NeK**)	8,858 / ***dTex***	{# 560 Yd hanks/Lb}
English Wool Count (**NeW**)	19,377 / ***dTex***	{# 256 Yd hanks/Lb}
English Linen Count, wet spun (**NeL**)	16,535 / ***dTex***	{# 300 Yd hanks/Lb}
Metric Count (**Nm**)	10,000 / ***dTex***	{Kg / Km}
Yards per Pound Yield (**YpP**)	4,960,550 / ***dTex***	{Yards / Lb}

Example: if 10 m weigh 590 mg then ***dTex* = 590**. **Tex** = 590 X 0.1 = **59** {or 2x29.5}, **Nm** = 10,000/590 = #**17**, **NeC** = 5905/590 = #**10** {or 20/2}, **NeW** = 19,377/590 = #**33**