1. Set up a computation table to determine the dry mass of the solid-waste sample using the data given in Table 10-4.

Component	Percent by mass	Moisture content, %	Dry mass,* kg
Food waste	15	70	4.5
Paper	45	6	42.3
Cardboard	10	5	9.5
Plastics	10	2	9.8
Garden trimmings	10	60	4.0
Wood	5	20	4.0
Tin cans	5	3	4.9
			79.0

* Based on 100-kg sample of waste

2. Determine the moisture content using Eq. (10-1) and the data from step 1.

$$\text{Moisture content} = \left(\frac{100 - 79.0}{100} \right) 100 = 21.0\%$$

COMMENT The composition of the solid-waste sample used in this example will be used in all of the examples in this chapter. By using the same composition throughout, the interrelationship of the various parameters can be established more clearly.

Density

Typical densities for various wastes as found in containers are reported by source in Table 10-5. Because the densities of solid wastes vary markedly with geographic location, season of the year, and length of time in storage, great care should be used in selecting typical values. Estimation of the density of a waste sample is illustrated in Example 10-2.

Example 10-2: Estimating the density of a solid-waste sample Estimate the "as-discarded" density of a solid-waste sample with the composition given in Example 10-1.

SOLUTION

1. Set up a computation table to determine the as-discarded volume of the solid waste sample using the data reported in Table 10-5.

$SW - 8$