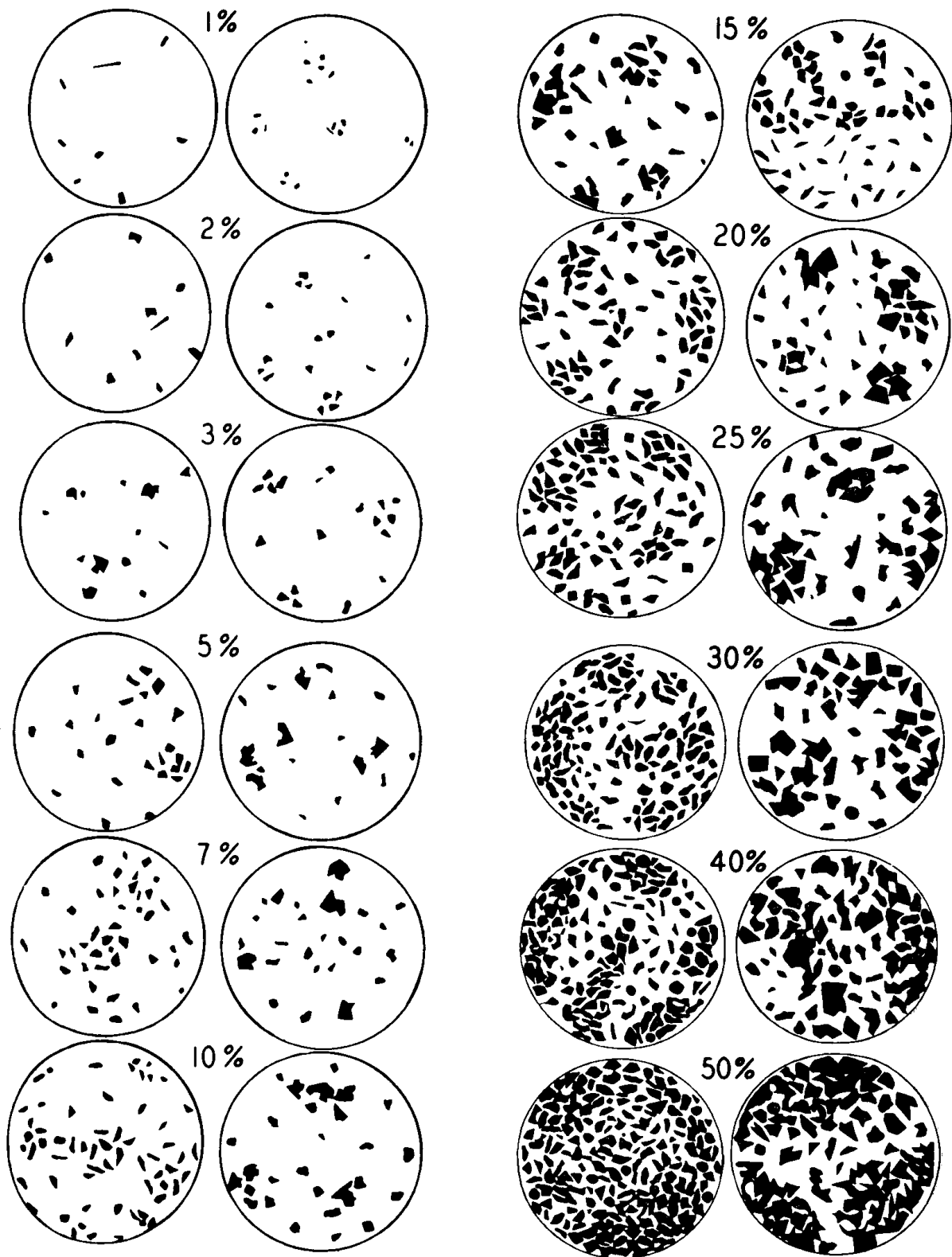


GY 402 Sedimentary Petrology (W)
In-class Group Activity Two
Hand Specimen Examination

Your Task: As a field sedimentologist, it is vital that you be able to properly describe sedimentary rocks and the particles that comprise them. What are the grains composed of? What is their grain size? How well rounded are they? How well sorted are they? Does the rock have any physical structures like lamination or bedding? Are there any colour differences that might be associated with mineral differences or alteration. There are too many possible variables to list all here; it really depends upon the rock that you are examining.

In today's activity, I would like you to work in your groups to describe as accurately as possible the physical characteristics of at least 4 of the specimens that will be available in the class room. Each member of your group should look at each of the samples you are selected and agree upon those characteristics. I expect to hear and see lively discussions among group members during the activity. At a minimum, I expect you to list the grain size, sorting, mineralogy and angularity of sedimentary particles for each of the samples that you have selected. You may choose to summarize these data in written paragraph form or in a table. We haven't had a chance to discuss sedimentary structures yet, but I am happy to provide help with them if your sample(s) contain them.

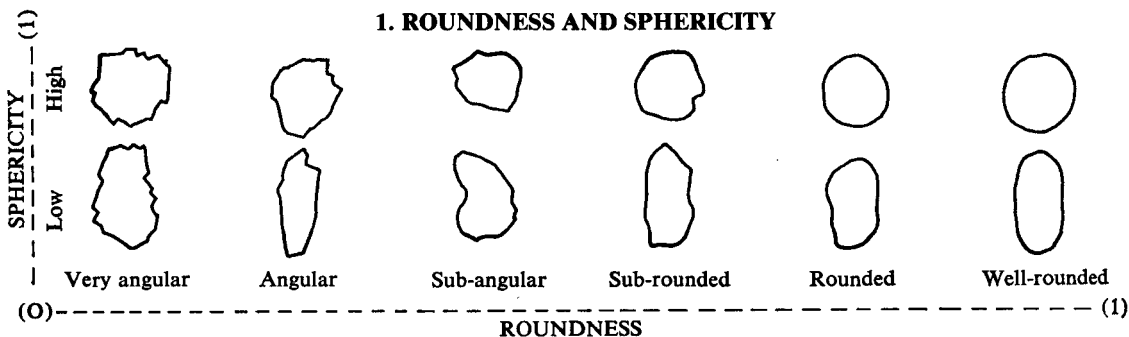
Due date/Revision date: see website for due date



Comparison chart for estimating mineral percentages in thin-section (Not the best way to do this, but relatively fast). From Terry R.D. and Chiligar, G.V., 1955. Concerning some additional aids in studying sedimentary formations. *Journal of Sedimentary Petrology*, 25, 229-234.

ROUNDNESS AND SPHERICITY, RELATIVE RESISTANCE TO ABRASIVE ROUNDING, AND PARTICLE SIZE TERMINOLOGY FOR SEDIMENTARY AND PYROCLASTIC PARTICLES

1. ROUNDNESS AND SPHERICITY



2. RELATIVE RESISTANCE TO ABRASIVE ROUNDING

Quartz (most resistant), tourmaline, microcline, staurolite, titanite, magnetite, garnet, ilmenite, epidote, zircon, hornblende, rutile, diaspore, hypersthene, spodumene, apatite, monazite, augite, hematite, bronzite, kyanite, enstatite, fluorite, siderite, barite (least resistant).

From Berkman, 1989. Field Geologists Manual, Australian Institute of Mining and Mineralogy,