

bound to host material. Because no staining was obtained, it was necessary to wash and stain the specimen grids with uranyl acetate in the usual manner for electron microscopy.

Peanut Stripe. Even though the PSV virions could be found more readily in other hosts (Figure 4C), we felt that it was important to be able to concentrate this virus directly from peanut, an important natural host, and because the slime elements present in peanut sap made that host more of a challenge to obtain successful results via the CVC procedure. The results were satisfactory in that both cleaner grid backgrounds and a respectable virion concentration were obtained (Figure 4D). However, traces of the slime elements did persist in the final supernatant.

Pepper Mottle. The standard procedure worked well with pepper mottle for concentration and clarification. However, extensive linear aggregation made counts of particles impractical. The extent of the effectiveness of the procedure may be judged by comparing Figure 3, C and D.

Sonchus Yellow Net (Figure 4B). The total number of particles from CVC preparations of this virus were the lowest for any of the viruses covered here. However, SYNV particles were so rare in the starting extracts that the ratio of enhancement, as determined by numbers of particles, was 18:1 and 39:1 in two separate experiments. Virions were never found in preparations that lacked stabilizing additives such as sodium sulfite.

Tobacco Necrosis. Relatively few counts were made from preparations of this virus. Even at the high magnification used, virions found on grids prepared from the CVC-processed samples were so numerous that it was likely they were in competition for the available grid sites (see Figure 3, A and B). Thus, the magnitude of enhancement was probably considerably greater than the counts indicated. The numbers of particles/field, considering the magnification used, was the highest of any virus in this study.

Tobacco Ringspot. This virus had the highest ratios of particle increases in the CVC preparations of any listed here, and the total numbers of virions were only exceeded by TNV. The standard procedure worked exceptionally well for this virus, not surprising considering that the solvent system used in the procedure was originally devised for the purification of TRSV (27). The numbers of virions observed on the specimen grids were so great that once again, as with TNV, particles may have been forced to compete with each other for grid sites, and the true ratios of enhancement obtained via the CVC method would have been greater than the counts reflect.