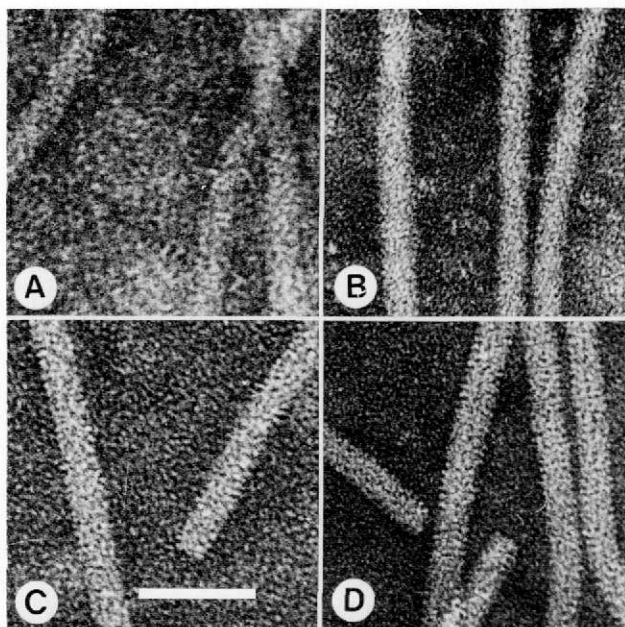


UA. Most importantly, UF solutions are unstable in most solvents, including water. In many solvents, UF will begin to precipitate within minutes after dissolving. Like UA, UF is incompatible with BSA and it is stable with bacitracin for only a few minutes. In spite of all of these defects, UF is unexcelled in delineating fine structural detail, and should be used whenever it is necessary to study virion



Figures 9 (left) Effects of several negative stains and wetting agents upon and 10 (right). the appearance and resolution of a purified preparation of pepper mottle virus (potyvirus). Figures 9 and 10 are micrographs taken from the same areas and differ only as to magnification. *A* and *B*: stained with 2% PTA. *C*: stained with 2% UA. *D*: stained with UF in water/methanol, as described in Appendix 2. *A*: BSA (250 $\mu\text{g/ml}$) used as a wetting agent. *B*, *C*, and *D*: bacitracin (250 $\mu\text{g/ml}$) used as a wetting agent. In Figure 9, note the difference in texture in the backgrounds of *A* and *B*. The BSA produces a distinctly more pebbly background than does the bacitracin. In Figure 10, note the effect of the stain/wetting agent combinations on particle substructure. The helical structure is not apparent in *A* (PTA/BSA) and is only hinted at in *B* (PTA/bacitracin). In *C* (UA/bacitracin), the helix is evident, and in *D* (UF/bacitracin), it is quite distinct. The micrographs in Figure 9 are all at the same magnification: bar = 100 nm. The magnifications of the micrographs in Figure 10 are the same: bar = 50 nm.