Answer question #64388, Chemistry / General Chemistry

Question:

What colour will orange, clearish vitamin c solution turn into when darkish blue DCPIP solution is dropped into it?

Answer:

The reaction, taking place between vitamin C and DCPIP is:

Vitamin C half-reaction (oxidation)

DCPIP, when added to acidic solution, is protonated fast and changes colour from blue to red. Then, DCPIP oxidizes vitamin C and becomes colourless. As dehydroascorbic acid (oxidized vitamin C) is also colourless, the drop of blue DCPIP solution will not change anything: the solution will stay colourless.