page 94, lines 12-14

Comparison of simplicial and singular cup products.

Assertion (a) can be interpreted as saying that Proposition 3 also holds for simplicial cup products. The formal definition of the latter is $[f \cup g](v_0 \ldots v_{p+q}) = f(v_0 \ldots v_p) \cdot g(v_p \ldots v_{p+q})$ and one can apply the arguments in the singular case provided we replace $T \,|\, e_i \ldots e_j$ (singular) with $v_i \ldots v_j$ (simplicial).

To prove assertion (b), let $\theta : C_*(K) \longrightarrow S_*(P)$ be the map from simplicial to singular chains, and let $\Psi : S^*(P) \longrightarrow C^*(P)$ be the dual cochain map. Then $\Psi(f \cup g)(v_0 \ldots v_{p+q}) = f \cup g(\theta(v_0 \ldots v_{p+q})) =$

$f(\theta(v_0 \ldots v_p)) \cdot g(\theta(v_p \ldots v_{p+q})) =$

$\Psi f(v_0 \ldots v_p) \cdot \Psi g(v_p \ldots v_{p+q}) = [\Psi f \cup \Psi g](v_0 \ldots v_{p+q})$.