From the Equation 1.66 (the components of **vector product**), when $\vec{C} = \vec{A} \times \vec{B}$,

$$C_i \equiv (\vec{A} \times \vec{B})_i = \sum_{j,k} \epsilon_{ijk} A_j B_k \tag{1.66}$$

and the definition of the **scalar product** (Equation 1.52),

$$\vec{A} \cdot \vec{B} = \sum_i A_i B_i \tag{1.52}$$

Then, the **triple scalar product** is

$$\begin{aligned} \mathbf{ABC} = \vec{A} \cdot (\vec{B} \times \vec{C}) &= \sum_i A_i (\vec{B} \times \vec{C})_i \\ &= \sum_i A_i \Big(\sum_{j,k} \epsilon_{ijk} B_j C_k \Big) \\ &= \sum_i \sum_{j,k} \epsilon_{ijk} A_i B_j C_k \\ &= \sum_{i,j,k} \epsilon_{ijk} A_i B_j C_k \end{aligned}$$

Therefore,

$$\mathbf{ABC} = \sum_{i,j,k} \epsilon_{ijk} A_i B_j C_k$$