$$\cdots \underline{\quad} \quad \cdots \underline{\quad}$$
$$= \qquad \qquad \Longleftrightarrow \qquad \mathrm{tr}_1[(\hat{I} \otimes \hat{\rho})(\ldots)]$$
$$\cdots \underline{\quad} \hat{\rho}^{\dagger} \qquad \cdots \underline{\quad}\!\!\!\!\!\!\!D\ \hat{\rho}$$