Table S2. DNF learning algorithm

**Disjunctive Normal Form Learning Algorithm** (C, \( n^+ \)):

**Input:**

- A set \( C \) of clauses
- \( n^+ \): the set of positive sequence index to be covered by the clauses

**Steps:**

1. Equivalence filtering
2. Among the clauses that cover only the positive sequences, find a minimum set of clauses that cover all the positive sequences:
   - 2a. start from the clauses that cover the positive sequences which are rarely covered by other clauses
   - 2b. repeat 2a recursively until all the positive sequences \( n^+ \) are covered

**Output:**

The set of the shortest DNF