

ABSTRAK

Mortir dan stamper merupakan alat peracikan yang seringkali digunakan di Puskesmas. Mortir stamper tergolong dalam alat konvensional yang memang mudah untuk dibersihkan, namun tidak semua prosedur dinilai cukup mampu untuk membersihkannya dari sisa pengotor. Penelitian ini bertujuan untuk melakukan validasi pembersihan mortir dan stamper di Puskesmas “X”, Kabupaten Sleman terkait adanya kontaminasi silang antara zat aktif obat racikan. Penelitian ini berjenis penelitian observasional *cross sectional*. Validasi pembersihan dilakukan terhadap standar operasional pembersihan alat peracikan yang ada di puskesmas sehingga dapat lebih menggambarkan kondisi pembersihan yang seragam dan terhindar dari variasi metode pembersihan interpersonal. Validasi pembersihan alat yang dilakukan adalah dengan menentukan *marker* pada mortir stamper, penetapan nilai *Maximum Allowable Carryover (MACO)*, pengambilan sampel dengan metode bilas, dan penentuan *Carryover (CO)* dengan menggunakan spektrofotometer berbantuan kemometrika. Nilai CO di bawah nilai MACO mengindikasikan keberhasilan prosedur pembersihan yang mampu menurunkan kadar kontaminan di bawah batas penerimaan.

Hasil penelusuran ilmiah berdasarkan periode observasi peracikan pada bulan September membuktikan salbutamol sulfat merupakan *marker* dari penelitian ini karena memiliki angka kemungkinan risiko paling tinggi. Nilai MACO yang didapatkan dalam penelitian ini adalah 0,00225 mg sementara nilai CO lebih besar yaitu 0,38717 mg. Artinya prosedur pembersihan kurang baik dalam membersihkan residu, namun secara farmakologis tidak berisiko karena masih di bawah dosis aktif salbutamol sulfat. Oleh karena itu, evaluasi terkait pembersihan mortir stamper di Puskesmas “X” tetap perlu dievaluasi kembali.

Kata kunci: *Pulverizer, marker, validasi pembersihan, Maximum Allowable Carryover (MACO), dan Carryover (CO)*

ABSTRACT

Mortars and stampers are compounding tools frequently used in community health centers (Puskesmas). Mortar stampers are considered conventional tools and are easy to clean, but not all procedures are considered adequate to remove residual contaminants. This study aimed to validate the cleaning of mortars and stampers at Community Health Center "X" in Sleman Regency regarding cross-contamination between active ingredients in compounded drugs. This study was an observational cross-sectional study. Cleaning validation was conducted against the standard operating procedures for cleaning compounding tools at the community health center to better reflect uniform cleaning conditions and avoid variations in cleaning methods between personnel. The tool cleaning validation included determining markers on the mortar stamper, determining the Maximum Allowable Carryover (MACO) value, taking samples using the rinse method, and determining Carryover (CO) using a chemometric-assisted spectrophotometer. A Carry Over value below the MACO value indicates successful cleaning procedures, reducing contaminant levels below the acceptable limit.

Scientific research based on the compounding observation period in September confirmed that salbutamol sulfate was the marker for this study because it had the highest risk profile. The MACO value obtained in this study was 0.00225 mg, while the CO value was higher at 0.3872 mg. This means the cleaning procedure is not good enough to clean the residue, but it is not pharmacologically risky because it is still below the active dose of salbutamol sulfate. Therefore, further evaluation of the mortar stamper cleaning at Community Health Center "X" is still necessary.

Keywords: Pulverizer, marker, cleaning validation, Maximum Allowable Carryover (MACO), and Carryover (CO)