

**DEBU AKRILIK YANG DIHASILKAN PADA PROSES
PEMBUATAN PLAT ORTODONTI LEPASAN DI
LABORATORIUM DIII TEKNIK KESEHATAN GIGI
UNIVERSITAS AIRLANGGA**

ABSTRAK

Latar belakang: Proses *finishing* dan *polishing* pada pembuatan peranti ortodonti lepasan dapat menghasilkan debu akrilik yang berasal dari bahan *poly methyl methacrylate*. Hal ini tentu dapat membahayakan kesehatan tubuh. **Tujuan:** Untuk mengetahui jumlah rata-rata debu akrilik yang dihasilkan dari proses *finishing* dan *polishing* pada pembuatan plat ortodonti lepasan. **Metode:** Jenis penelitian yang digunakan adalah penelitian deskriptif observasional. Sampel yaitu seluruh jumlah pekerjaan plat ortodonti mahasiswa semester VI Teknik Kesehatan Gigi Universitas Airlangga yang memenuhi kriteria selama bulan Februari – Mei 2016 sebanyak 93 buah, terdiri atas 62 plat ortodonti rahang atas dan 31 rahang bawah. Jumlah debu akrilik yang dihasilkan dihitung dari selisih antara berat plat ortodonti setelah proses pengisian akrilik dan berat setelah proses *finishing* dan *polishing*. **Hasil:** Debu akrilik yang dihasilkan dalam pembuatan sebuah peranti ortodonti lepasan rata-rata adalah 1,23 gram dengan rentang 0,29 – 3,54 gram. Rata-rata debu akrilik yang dihasilkan plat ortodonti rahang atas 1,39 gram lebih besar daripada rahang bawah 0,91 gram. Hasil penelitian juga menunjukkan proses *finishing* lebih banyak menghasilkan debu akrilik dibandingkan dengan proses *polishing*. **Kesimpulan:** Debu akrilik yang dihasilkan pada proses pembuatan suatu peranti ortodonti lepasan oleh mahasiswa semester 6 Teknik Kesehatan Gigi Universitas Airlangga rata-rata 1,23 gram. Proses *finishing* lebih banyak menghasilkan debu akrilik dibandingkan dengan proses *polishing*. Faktor ketrampilan mahasiswa, desain plat ortodonti dan jenis rahang atas ataupun rahang bawah juga berpengaruh pada jumlah debu akrilik yang dihasilkan.

Kata kunci: plat ortodonti, *finishing* dan *polishing*, debu akrilik.

**ACRYLIC DUST PRODUCED FROM THE FABRICATION OF
REMOVABLE ORTHODONTIC APPLIANCE IN
LABORATORY OF DENTAL HEALTH TECHNOLOGY IN
AIRLANGGA UNIVERSITY**

ABSTRACT

Background: *The process of finishing and polishing removable orthodontic appliance production can result acrylic dust which comes from poly methyl methacrylate material. It certainly can be harmful for health.* **Purpose:** *To determine the average amount of acrylic dust produced from the process of finishing and polishing of removable orthodontic application fabrication.* **Methods:** *The research design was descriptive observational study. The numbers of samples taken were the entire amount of orthodontic appliance that were made by the 6th semester students of Health Dental Technology Study Program of Airlangga University in which met the criteria during February till May 2016. As many as 93 pieces in which consisting of 62 upper orthodontic plates and 31 lower orthodontic plates. The amount of acrylic dust produced was calculated from the difference between the weight ofc orthodontic plate after the acrylic processing and the weight after finishing and polishing.* **Results:** *The result showed that the average acrylic dust produced in the removable orthodontic appliance fabrication was 1.23 gram with a range of 0.29 to 3.54 grams. The average acrylic dust produced by upper orthodontic plate (1.39 grams) was greater than the lower plate (0.91 gram). Results also showed that the finishing process produced more acrylic dust than the polishing process.* **Conclusions:** *Acrylic dust produced in the process removable orthodontic appliance production by the 6th semester of Airlangga University Dental Health Engineering students with an average of 1.23 grams. The finishing process produced more acrylic dust than the polishing process. Student's skills factor, orthodontic plate design and the type of the upper jaw or lower jaw also affected the acrylic dust produced.*

Keywords: *orthodontic plate acrylic, finishing and polishing, acrylic dust.*