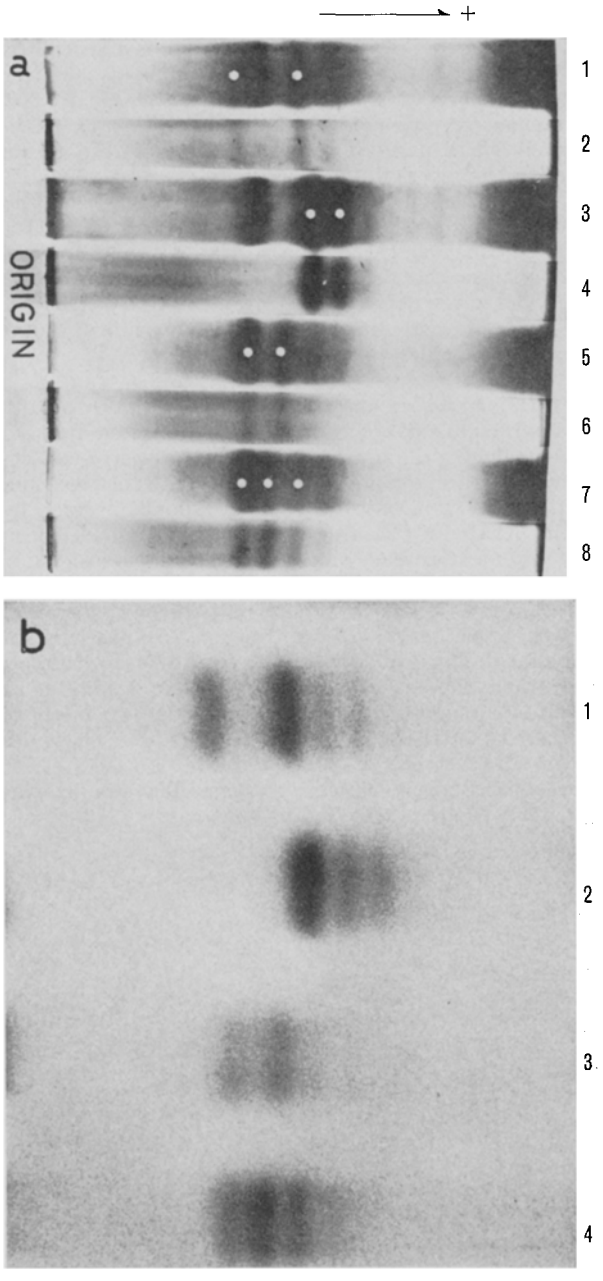

a) Acrylamide-gel electrophoretic patterns of black rat sera and the transferrin fractions partially purified with acrinol and ethanol. Sample Nos. 1, 3, 5 and 7: crude sera; 2, 4, 6 and 8: partially purified transferrins. 1 and 2: Tf-CF in *Rattus rattus* collected from Kanpur in India. 3 and 4: Tf-C_1 from Kandy in Sri Lanka. 5 and 6: Tf-CE from Islamabad in Pakistan. 7 and 8: Tf-DE from Kandy in Sri Lanka. b) Autoradiographic demonstration of transferrin bands on the acrylamide-gel. Sample Nos. 1, 3, 5 and 7 are correspond to those dotted in Figure a.

64 m*M* *Tris*-aminomethane and 11.2 m*M* citric acid. The mixed solution was poured into the lucite form (100 × 180 mm square inside and 1 mm thick) which was put on a glass plate (120 × 200 × 5 mm) overlaid by a wet cellophane. Then it was covered by a lucite lid with 10 slot formers (8 × 1 × 1 mm) at the starting positions. After standing at room temperature for 3 hours, gelation of the thin layer plate (100 × 180 × 1 mm) was completed. Usually the electrophoresis was conducted at the room temperature for 4.5 h with a constant current power supply at 1.0 mA/cm gel width. After staining for 30 min with amide black, the gel was washed repeatedly by 7% acetic acid.

We have applied the present method to analyse serum transferrin polymorphism in feral black rats, *Rattus rattus*, collected from India, Pakistan and Sri Lanka. Typical electrophoretic patterns are shown in Figure a, where Tf-C, -C_1, -D, -E and -F could be definitely identified following acrinol and ethanol treatment (See sample Nos. 2, 4, 6 and 8). In order to confirm that these bands are transferrins, the crude sera (Sample Nos. 1, 3, 5 and 7) were labelled with Fe^{59}. Position of transferrins on the gel was examined by autoradiography. Figure b indicates beautiful coincidence of the radioactive bands with the transferrin bands exhibited by the acrinol method. Detailed data will be published elsewhere[5]. The relative distances between these transferrin band were almost similar to those demonstrated by the starch-gel electrophoresis method for rats[6].

The improved method described here seems to be useful for the easier analysis of serum transferrin polymorphism, not only in the rodents but in many other vertebrates including man.

Zusammenfassung. Verbesserte Methode für die Separation und Identifihation von Serum-Transferin. Bei Behandlung von Rattenserum (*Rattus rattus*)mit Acrinollösung und Alkohol und darauffolgender Dünnschicht-Acrylamidgel Elektrophorese können 12 Transferrine gut separiert werden.

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CONGRESSUS

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