

# Science Finds Easier Way To Make Salk Polio Vaccine Safer

By DELOS SMITH  
 United Press Science Editor  
 New York — (U.P.) — Science has come up with a new and easier way of making the Salk anti-polio vaccine safe and surer. It may speed the perfection of vaccines against other virus-caused diseases.

By the new way, live viruses can be all but completely separated from the substances in which they are grown. What you get are concentrations of viruses which contain just about nothing else.

The three scientists who performed this amazing feat made a kind of emergency report to the American Association for the Advancement of Science. They wanted to get an outline of the method to other scientists, especially those involved in making the Salk vaccine, as quickly as they could.

Has 'Many Applications'  
 These scientists — Joseph Smolens, Lewis Coriell and A. Green, of the School of Medicine, University of Pennsylvania

— said the method's "many applications" were "obvious."

For one thing, it can be used as a comparatively simple "safety test" of the Salk vaccine. For another, it can greatly simplify the "killing" or deactivation of the live polio viruses used in the vaccine. For still another, it can assure the "antigenic stability" of the vaccine — in other words, any given "shot" of vaccine would be just as effective as any other "shot" in stimulating blood chemistry into producing anti-bodies against polio viruses.

Their feat was based upon the discovery of Dr. E. J. Cohn of Harvard that heavy metals will assist in separating various components of blood plasma. The Cohn techniques had been used to concentrate and purify influenza viruses. Smolens, Greene and Coriell adapted them to polio viruses.

Method Utilizes Zinc  
 To monkey tissue cells in a nutrient bath in which polio viruses had grown, they added zinc

lactate. The temperature, degree of acidity, and the proportion of zinc had to be regulated in order to get the maximum affinity of viruses for zinc. Viruses and zinc "fell out" of the solution and were separated from it by whirling.

Then they had a pure compound of polio viruses and zinc lactate. The latter either was washed out or removed chemically. Repeated analysis showed that either method was remarkably effective — that less than two parts zinc remained for each 1,000,000 parts of viruses.

Analysis of the solution, after the viruses and zinc were whirled out of it, showed that it contained 0.1 per cent viruses, that meant that 99.9 per cent of the viruses it contained originally had been removed. Further tests showed that the viruses had not been changed or affected.

TRAIN DERAILED  
 Rugby, England — (U.P.) — The engine and six coaches of a 10-car train were derailed Sunday

| STAR GAZER  |   |   |
|---|---|---|
| By CLAY R. POLLAN   |   |   |
| Your Daily Activity Guide According to the Stars  |   |   |
| To develop message for Tuesday, read words corresponding to numbers of your Zodiac birth sign.  |   |   |
| ARIES<br>MAR. 22<br>APR. 20<br>4-5-10-24<br>31-42-74  | TAURUS<br>APR. 21<br>MAY 21<br>12-15-18-32<br>36-38-84-88   | GEMINI<br>MAY 22<br>JUNE 22<br>3-6-17-19<br>22-28-85-87   |
| CANCER<br>JUNE 23<br>JULY 23<br>41-45-51-55<br>61-67-70   | LEO<br>JULY 24<br>AUG. 23<br>54-57-68-69<br>71-77-79-81   | VIRGO<br>AUG. 24<br>SEPT. 22<br>1-8-9-34<br>46-60-75  |
| 1 The<br>2 Maintain<br>3 Handle<br>4 When<br>5 Others<br>6 Women<br>7 Harmony<br>8 Fog<br>9 Lifts<br>10 Talk<br>11 Beware<br>12 The<br>13 Today's<br>14 Of<br>15 Evening<br>16 With<br>17 And<br>18 Fears<br>19 The<br>20 Your<br>21 Events<br>22 Public<br>23 You<br>24 Contrary<br>25 Mate<br>26 Don't<br>27 Be<br>28 With<br>29 Electrical<br>30 Provide | 31 Amitude<br>32 Home<br>33 Too<br>34 There<br>35 Hardboiled<br>36 Interests<br>37 You<br>38 And<br>39 Should<br>40 Appearances<br>41 Aspects<br>42 Just<br>43 In<br>44 Help<br>45 Is<br>46 Answer<br>47 Of<br>48 Acids<br>49 Enjoy<br>50 Your<br>51 You<br>52 Increased<br>53 To<br>54 Don't<br>55 In<br>56 A<br>57 Let<br>58 A<br>59 Freedom<br>60 Less | 61 Forwarding<br>62 Attitude<br>63 This<br>64 Or<br>65 Evening<br>66 P.M.<br>67 Personal<br>68 Secret<br>69 Secrets<br>70 Interests<br>71 Out<br>72 Problem<br>73 Drugs<br>74 Listen<br>75 Confusion<br>76 Visit<br>77 Of<br>78 May<br>79 The<br>80 And<br>81 Bag<br>82 Or<br>83 Develop<br>84 Private<br>85 Special<br>86 Enjoyment<br>87 Tact<br>88 Affairs<br>89 Suddenh<br>90 Trip<br>8/9 |
| Good  | Adverse   | Neutral   |

between Manchester and London, killing the engineer and injuring 30 persons. Railway officials said the engine failed to catch connecting points when it crossed from one line to another.

Vatican City — (U.P.) — Countess Giuseppina Pacelli Mengarini, widowed sister of Pope Pius XII, died at her home Sunday night, high Vatican sources reported today. She was 83.

## Mindszenty Staying In Hungarian Castle

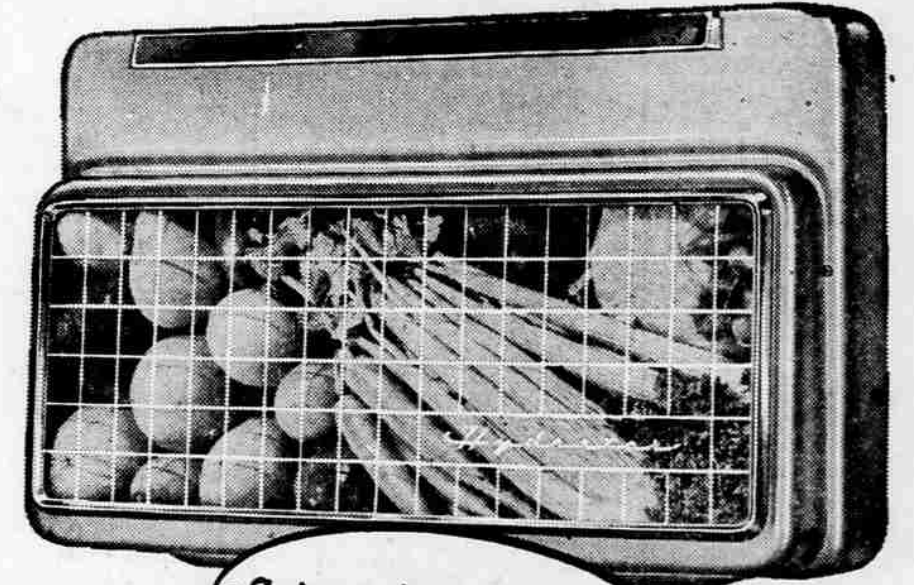
Vienna — (U.P.) — Josef Cardinal Mindszenty, Roman Catholic primate of Hungary, is staying at a castle near the city of Pecs in southern Hungary, church officials said today.

The government last month announced the release from

## GANGES FLOODS

Calcutta, India — (U.P.) — Spreading floods threatened 500 villagers along the Ganges river today and disrupted railway service. Rising waters of the Buriganga river overran Dacca and rescuers had to use small boats to move stranded citizens to safety.

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