Quality Control Procedures for Newer Radiopharmaceuticals

For each of the following questions, select the best answer. Then circle the reader service card number that corresponds to the answer you have selected. Keep a record of your responses so that you can compare them with the correct answers, which will be published in the next issue of the Journal. Answers to these test questions should be returned on the reader service card no later than March 1, 1992. Supply your name, address, and VOICE number in the spaces provided on the card. Your VOICE number appears on the upper left hand corner of your Journal mailing label. No credit can be recorded without it. A 70% correct response rate is required to receive 0.1 CEU credit for this article. Members participating in the continuing education activity will receive documentation on their VOICE transcript, which is issued in March of each year. Nonmembers may request verification of their participation but do not receive transcripts.

A. *Radiochemical purity is defined as the* _____.

149. proportion of the total activity that is present in any chemical form
150. proportion of the specific chemical form that is in the entire kit
151. proportion of the total activity that is present in the specific chemical form
152. proportion of the unbound activity that is present in the specific chemical form

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B. *What is (are) the most frequent error(s) when using miniaturized chromatography?*

153. strips are put into the wrong solvent system
154. radiopharmaceutical spot on strip is below initial solvent level and strips are counted incorrectly
155. radiopharmaceutical spot is too large and dries before putting into solvent
156. strips are cut incorrectly

C. *Which radiopharmaceuticals migrate to the solvent front?*

157. [^{123}I]IMP
158. ^{99m}Tc mertiatide
159. Ceretec lipophilic fraction
160. ^{99m}Tc teboroxime
161. ^{99m}Tc sestamibi
162. 159, 160, & 161
163. all of the above

D. *The advantage(s) of single-strip chromatography is (are) that it* _____.

164. is faster to use
165. takes 2 min to perform
166. is easy to use
167. takes less than 1 min to perform
168. 164, 165, & 166
169. 164, 166, & 167

E. *Thin layer and/or paper chromatography procedures are not available for* _____.

170. ^{99m}Tc exametazime
171. ^{99m}Tc teboroxime
172. ^{99m}Tc mertiatide
173. ^{99m}Tc sestamibi
174. 170, 172, & 173

F. *Testing for radiochemical purity is not necessary prior to use of these newer radiopharmaceuticals.*

175. True
176. False

G. *When the radiopharmaceutical spot has dried prior to solvent development,* _____.

177. oxidation of the radiopharmaceutical may occur
178. binding of all radiopharmaceuticals with support media may result
179. inaccurate assessment of radiopharmaceutical purity will result
180. all of the above

H. *Large errors may result in counting low activity strips when* _____

181. chromatography strips and solvent are too old
182. strips and/or solvent are reversed
183. strips are counted in a dose calibrator
184. strips are counted to close to the NaI(T1) well detector
185. all of the above