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C07F 9/6558 (2006.01)

Norwegian Industrial Property Office

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(54) Title **HETEROCYCLIC COMPOUNDS FOR THE TREATMENT OF NEUROLOGICAL AND
PSYCHOLOGICAL DISORDERS**

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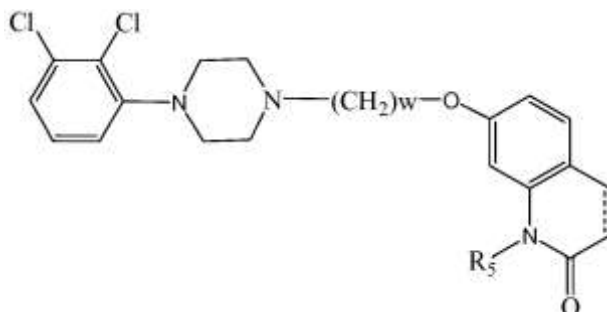
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Enclosed is a translation of the patent claims in Norwegian. Please note that as per the Norwegian Patents Acts, section 66i the patent will receive protection in Norway only as far as there is agreement between the translation and the language of the application/patent granted at the EPO. In matters concerning the validity of the patent, language of the application/patent granted at the EPO will be used as the basis for the decision. The patent documents published by the EPO are available through Espacenet (<http://worldwide.espacenet.com>) or via the search engine on our website here: <https://search.patentstyret.no/>

Patentkrav**1. En forbindelse representert ved formel V:**

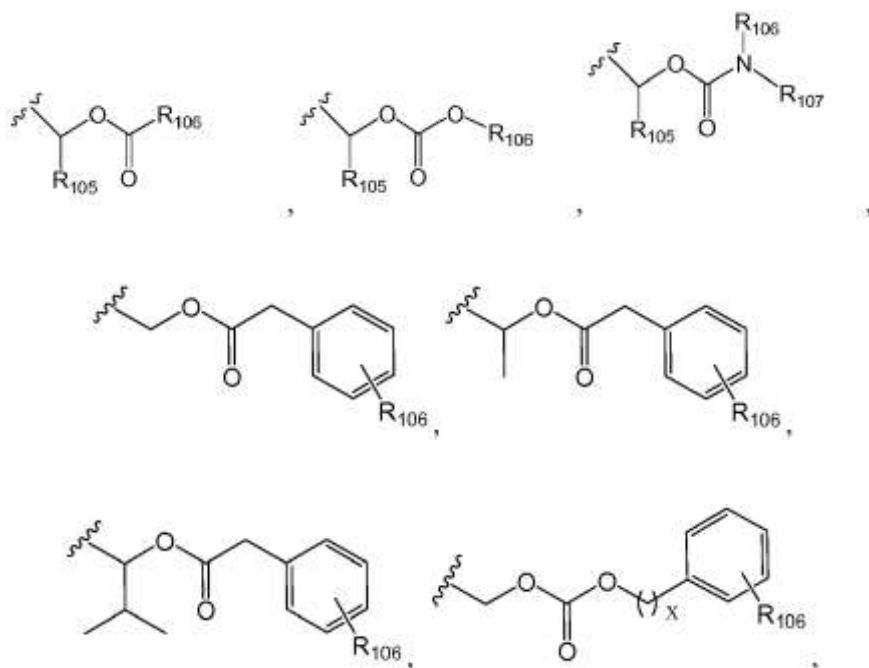
Formel V

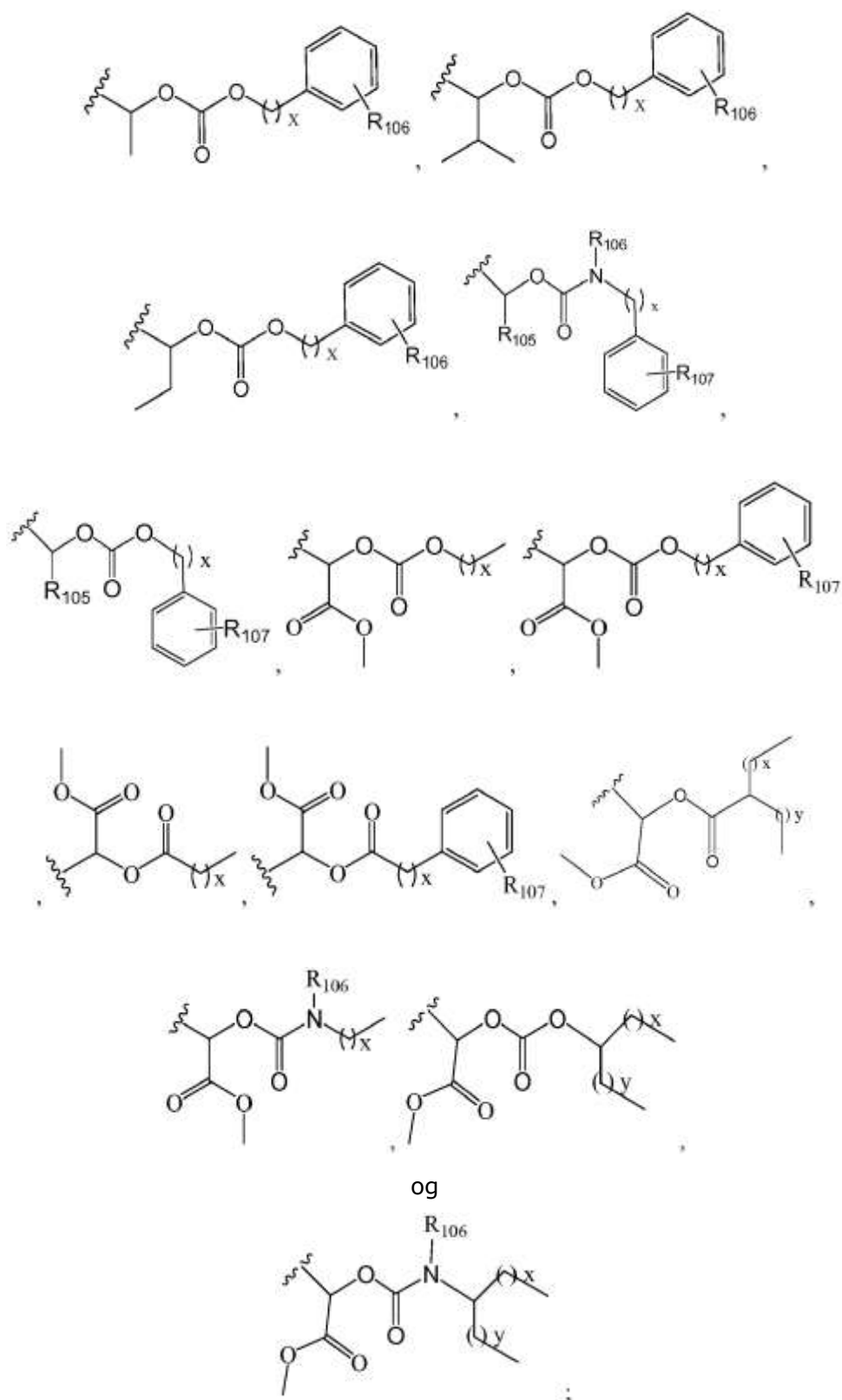
eller dens geometriske isomerer, enantiomerer, diastereomerer, racemater,
farmasøytisk akseptable salter og solvater derav,

hvor ----- representerer en enkelt- eller dobbeltbinding;

w er 4;

R₅ er valgt fra -CH(R₁₀)-OC(O)OR₂₀, -CH(R₁₀)-OC(O)R₂₀, -CH(R₁₀)-
OC(O)NR₂₀R₂₁,





hvor z er 1, 2, 3, 4, 5, 6, eller 7;

hver R_{20} og R_{21} er uavhengig valgt fra hydrogen, alifatisk, substituert alifatisk, aryl eller substituert aryl;

hver x og y er uavhengig et heltall mellom 0 og 30,

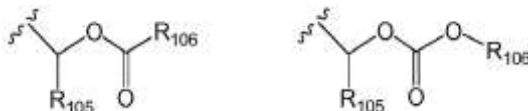
hvor R_{100} , R_{101} og R_{103} er uavhengig valgt fra hydrogen, halogen, eventuelt substituert C_1 - C_8 alkyl, eventuelt substituert C_2 - C_8 alkenyl, eventuelt substituert C_2 - C_8 alkynyl, eventuelt substituert C_3 - C_8 cykloalkyl, eventuelt substituert C_1 - C_8 alkoksy, eventuelt substituert C_1 - C_8 alkylamino og eventuelt substituert C_1 - C_8 aryl;

R_{105} , R_{106} og R_{107} er uavhengig valgt fra hydrogen, halogen, eventuelt substituert C_1 - C_{24} alkyl, eventuelt substituert C_2 - C_{24} alkenyl, eventuelt substituert C_2 - C_{24} alkynyl, eventuelt substituert C_3 - C_{24} cykloalkyl, eventuelt substituert C_1 - C_{24} alkoksy, eventuelt substituert C_1 - C_{24} alkylamino og eventuelt substituert C_1 - C_{24} aryl;

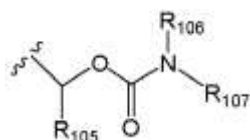
R_{10} er hydrogen, halogen, alifatisk, substituert alifatisk, aryl eller substituert aryl; og

hvor "substituert" refererer til erstatning av ett eller flere hydrogenradikaler i en gitt struktur med radikalet av en spesifisert substituent valgt fra halogen, alkyl, alkenyl, alkynyl, aryl, heterocyklyl, tiol, alkyltio, aryltio, alkyltioalkyl, aryltioalkyl, alkylsulfonyl, alkylsulfonylalkyl, arylsulfonylalkyl, alkoksy, aryloksy, aralkoksy, aminokarbonyl, alkylaminokarbonyl, arylaminokarbonyl, alkoksykarbonyl, aryloksykarbonyl, halogenalkyl, amino, trifluormetyl, cyano, nitro, alkylamino, arylamino, alkylaminoalkyl, arylaminoalkyl, aminoalkylamino, hydroksy, alkoksyalkyl, karboksyalkyl, alkoksykarbonylalkyl, aminokarbonylalkyl, acyl, aralkoksykarbonyl, karboksylsyre, sulfonsyre, sulfonyl, fosfonsyre, heteroaryl, heterocyklisk og alifatisk.

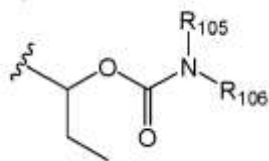
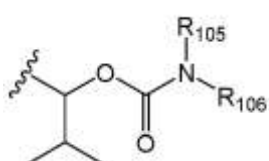
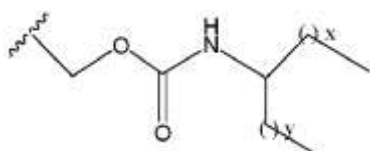
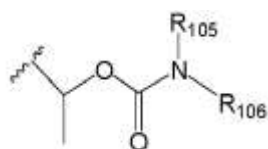
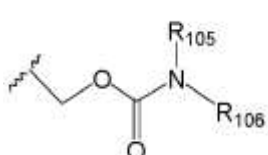
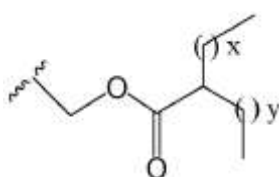
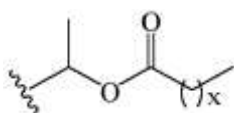
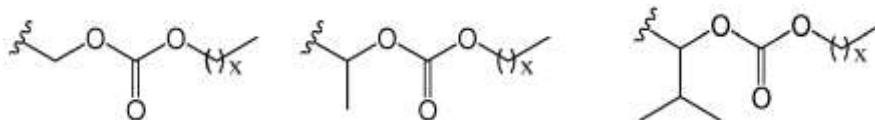
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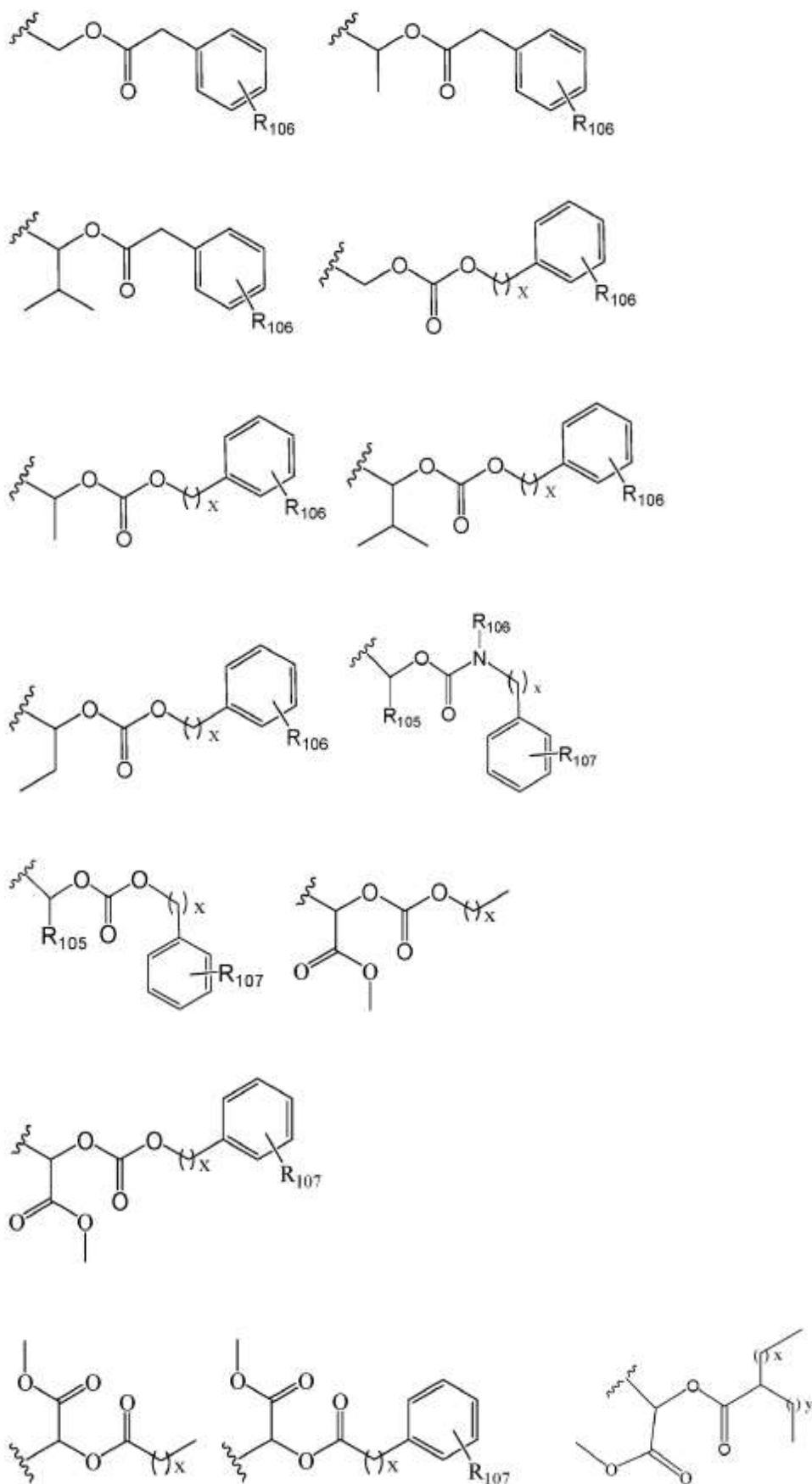


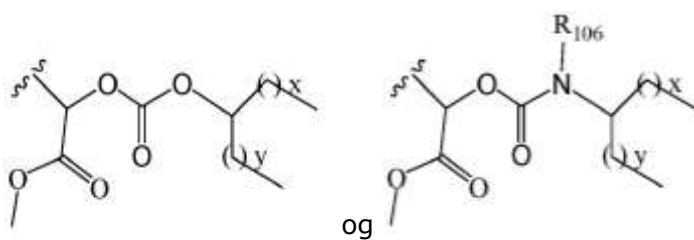
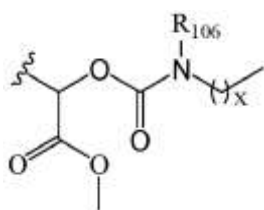
og



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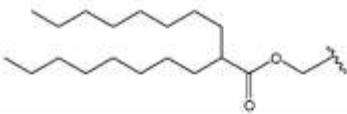
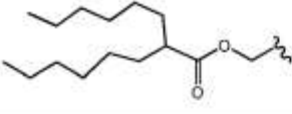
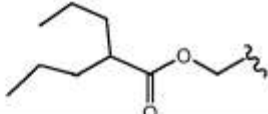
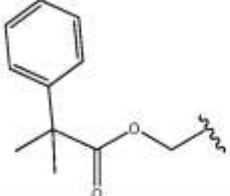
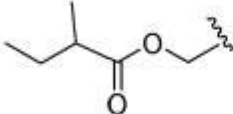
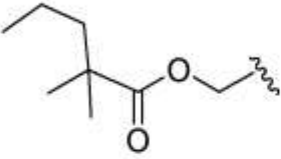
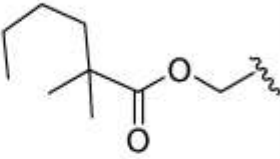
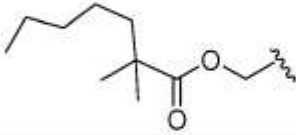
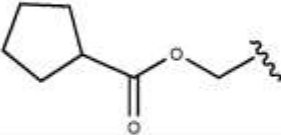
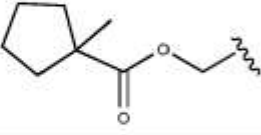
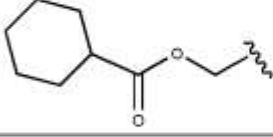
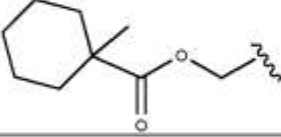
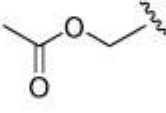
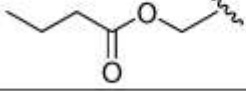
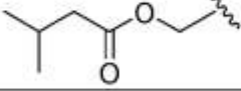
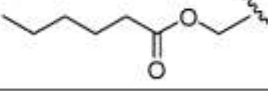
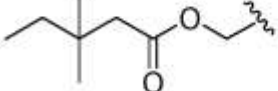
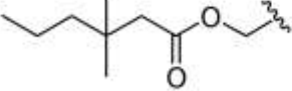
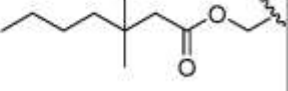
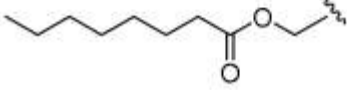
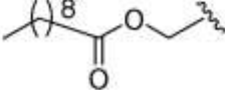
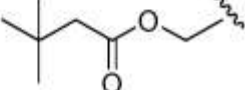
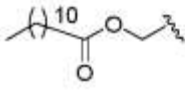
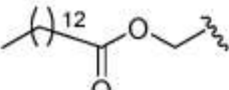
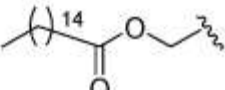


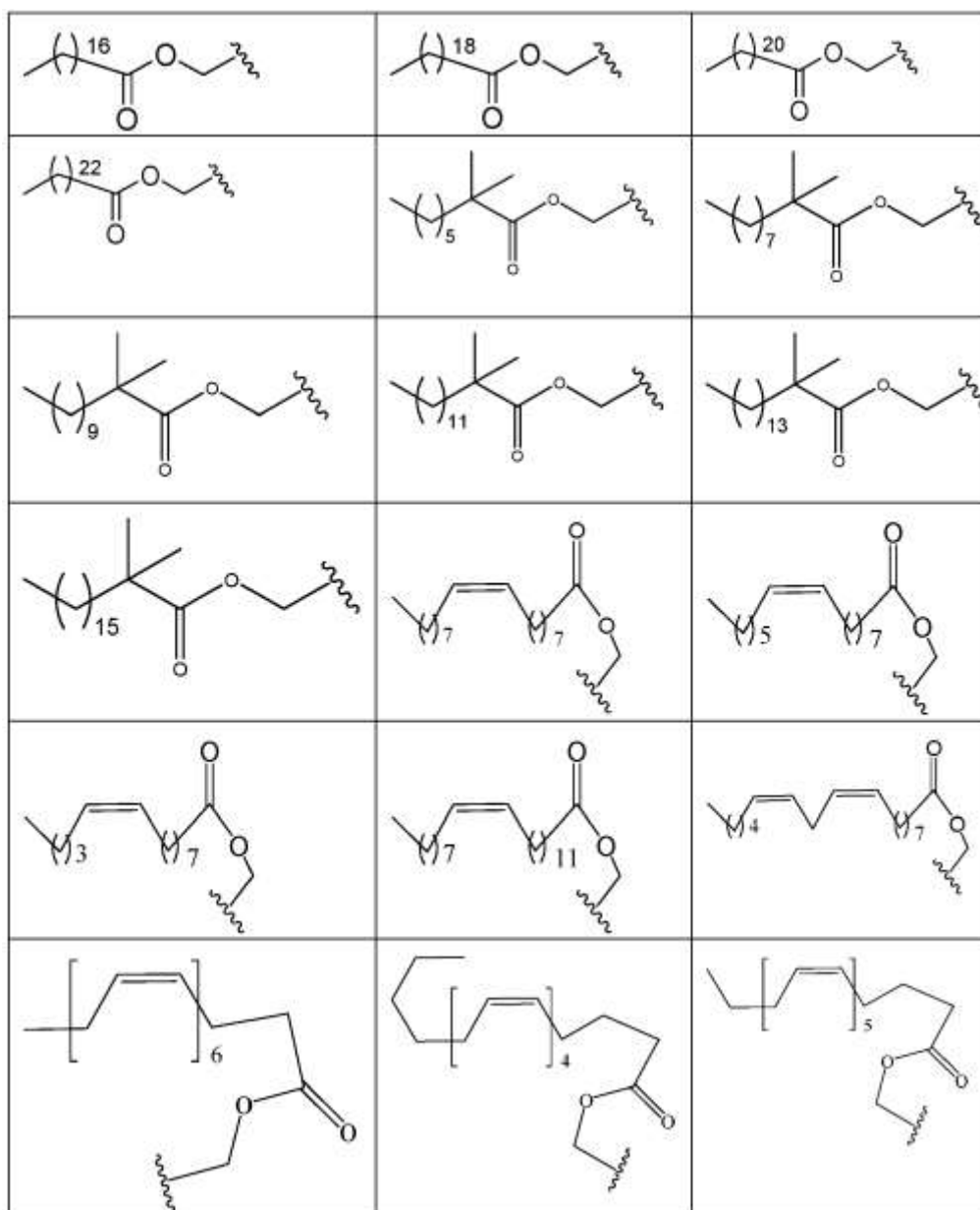


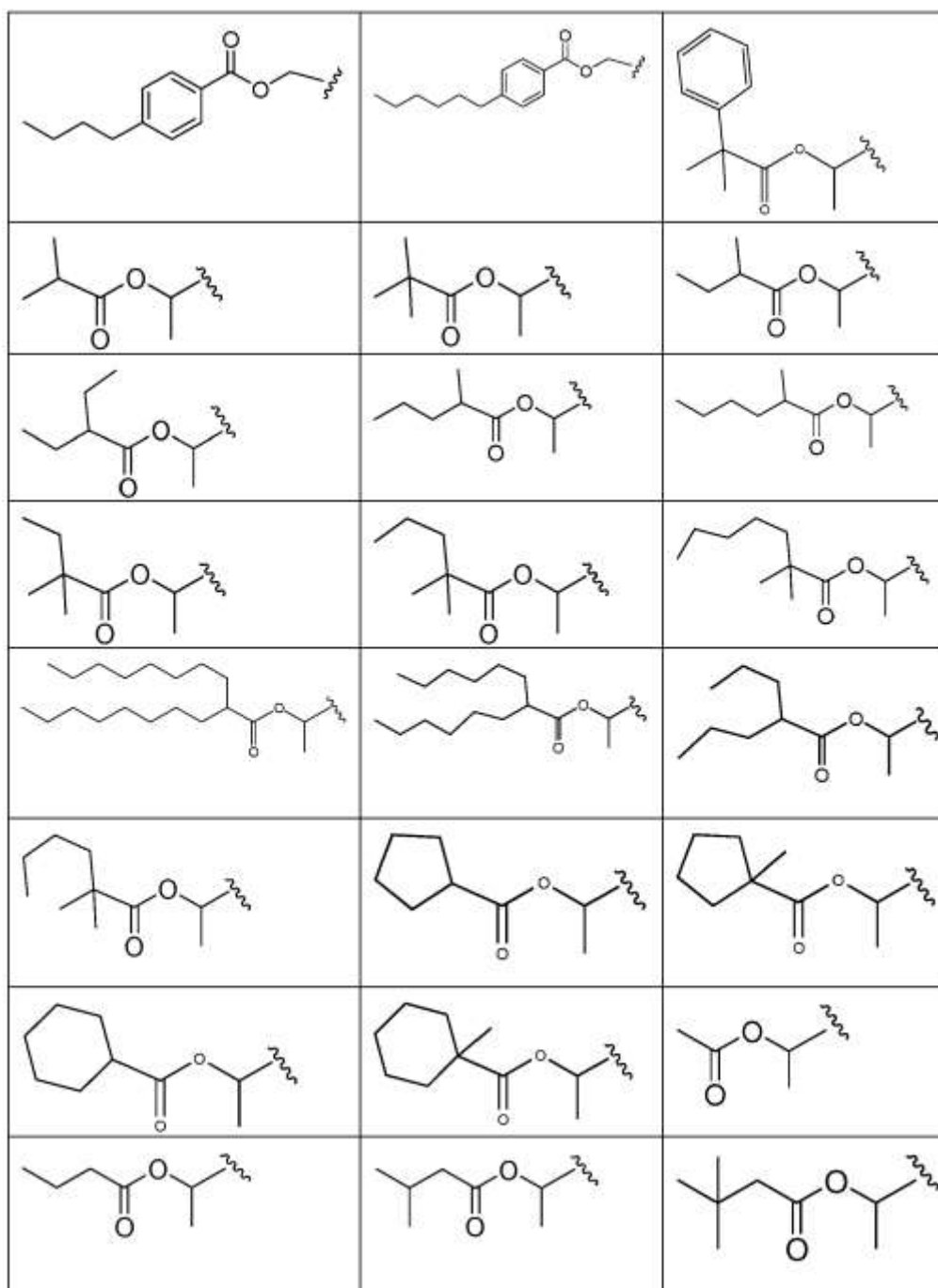
hvor, hver x og y er uavhengig et heltall mellom 0 og 30, og R_{105} , R_{106} , og R_{107} er som definert i krav 1.

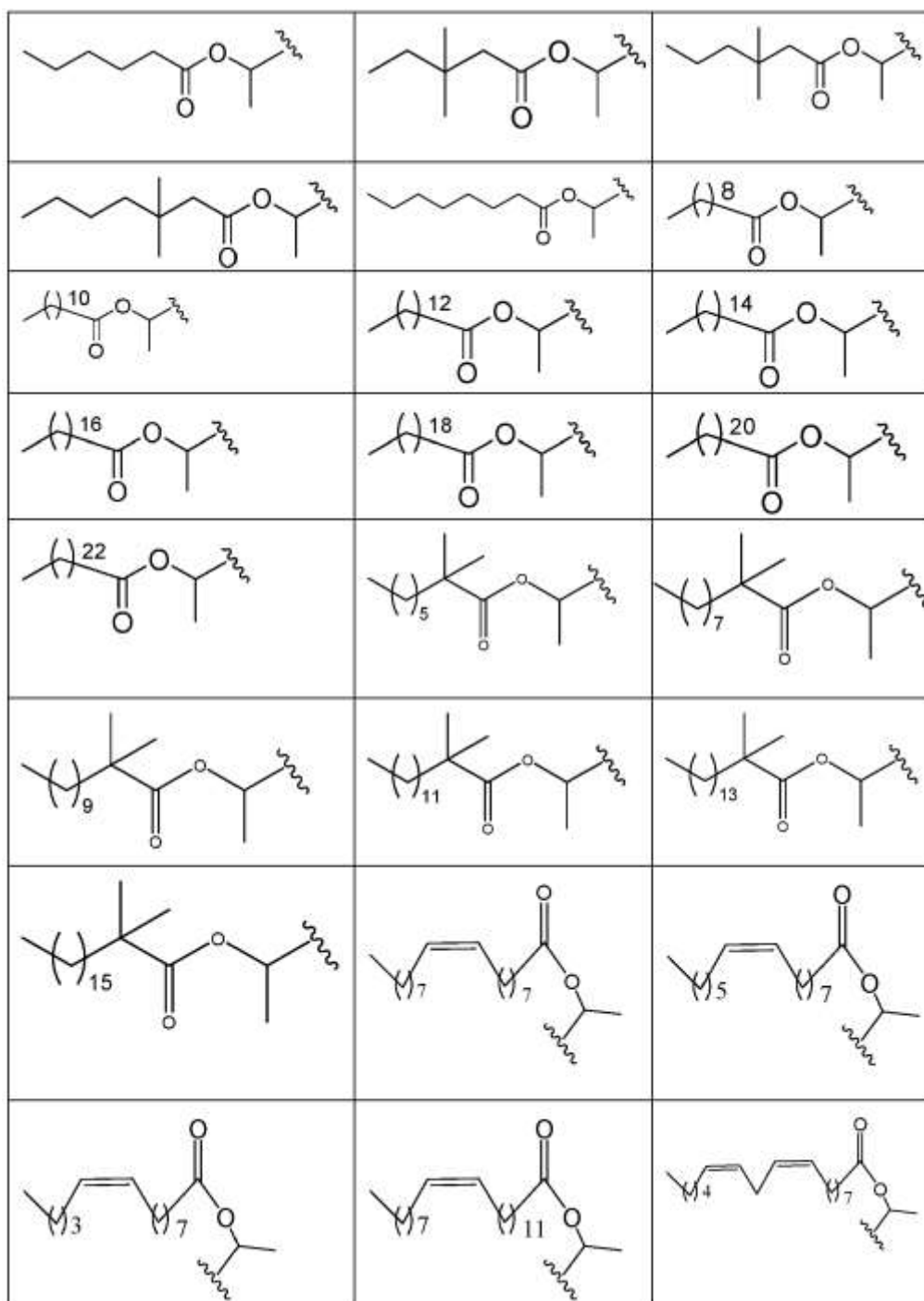
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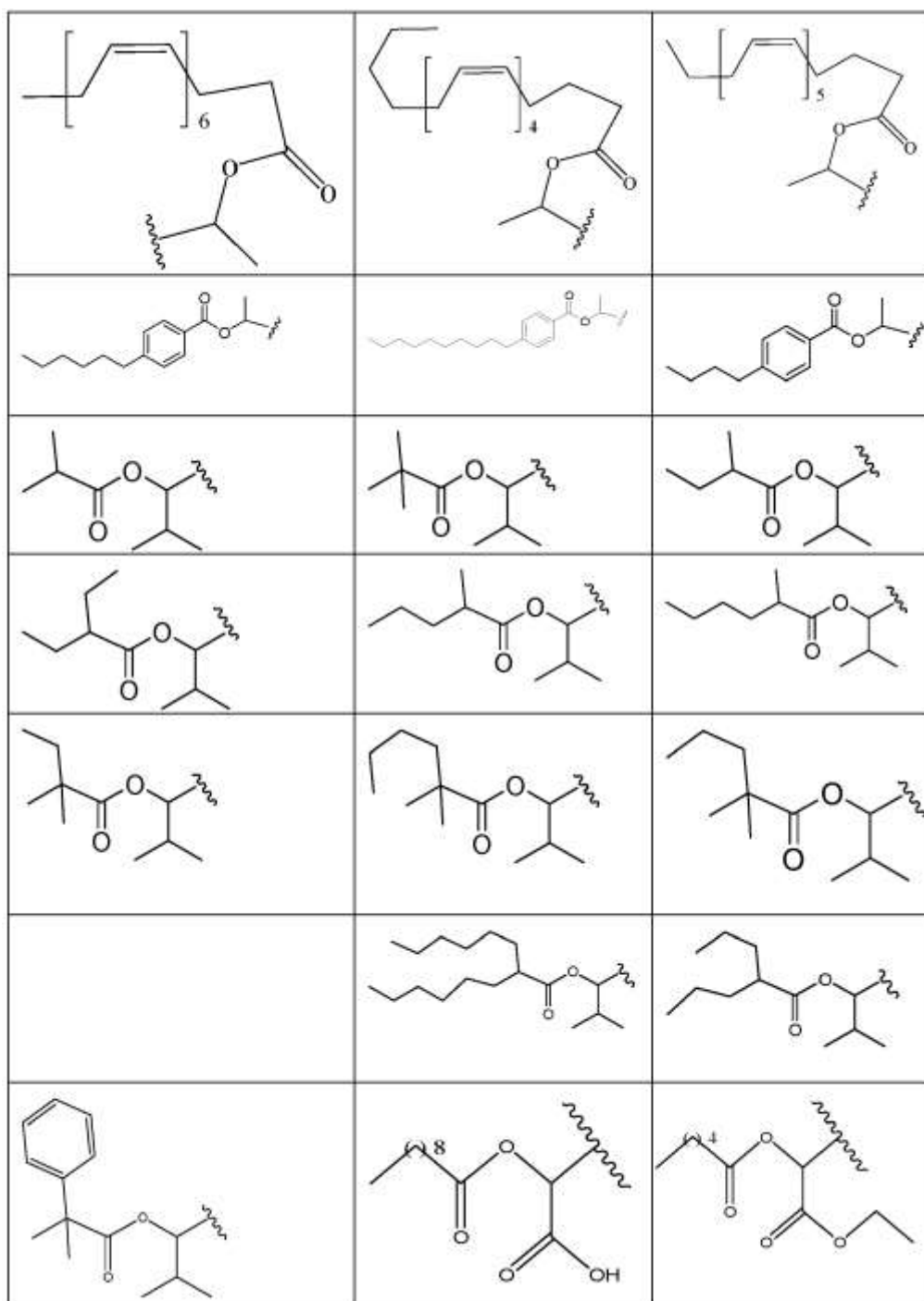
Tabell 1

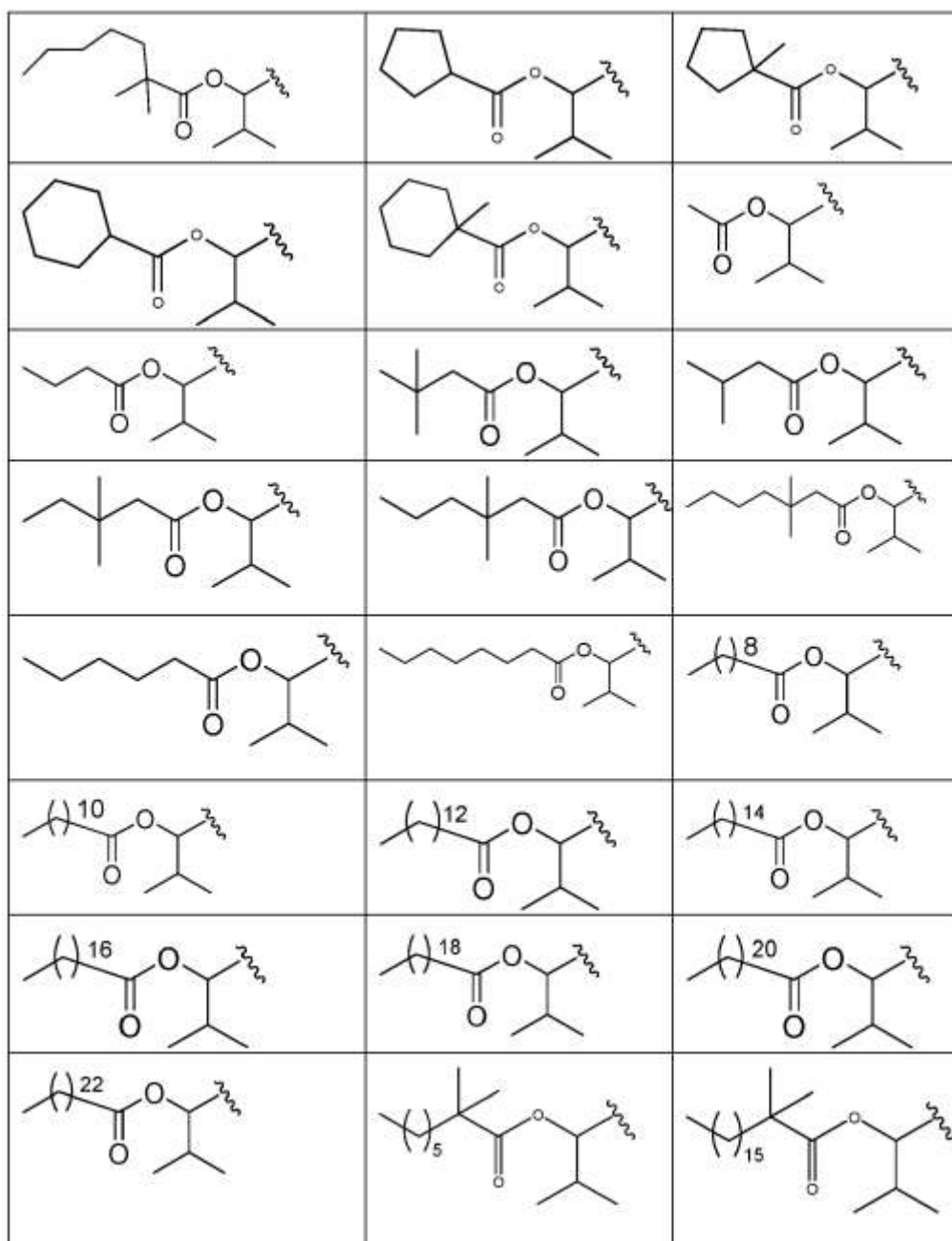
		
		
		
		
		
		
		
		
		

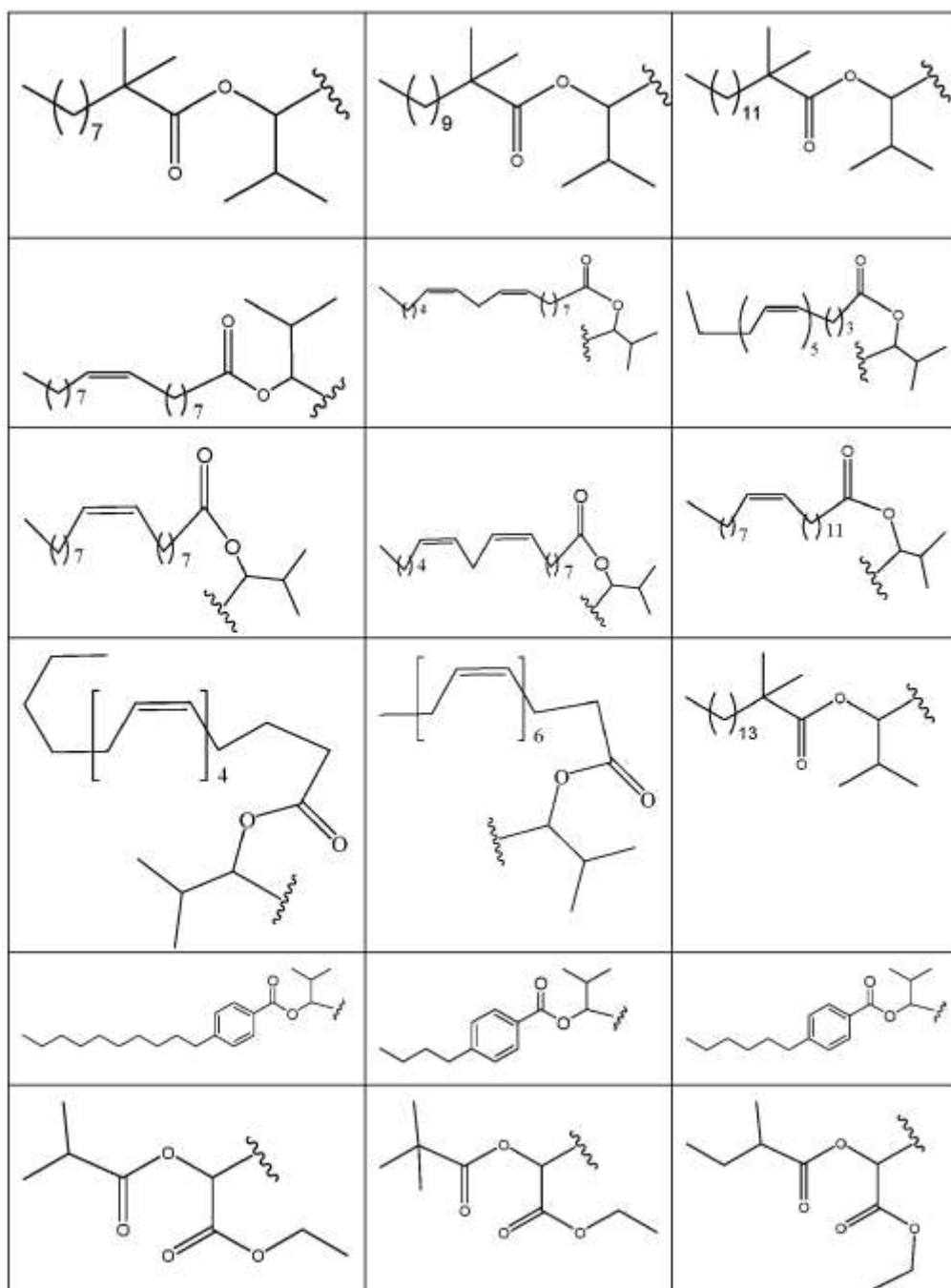


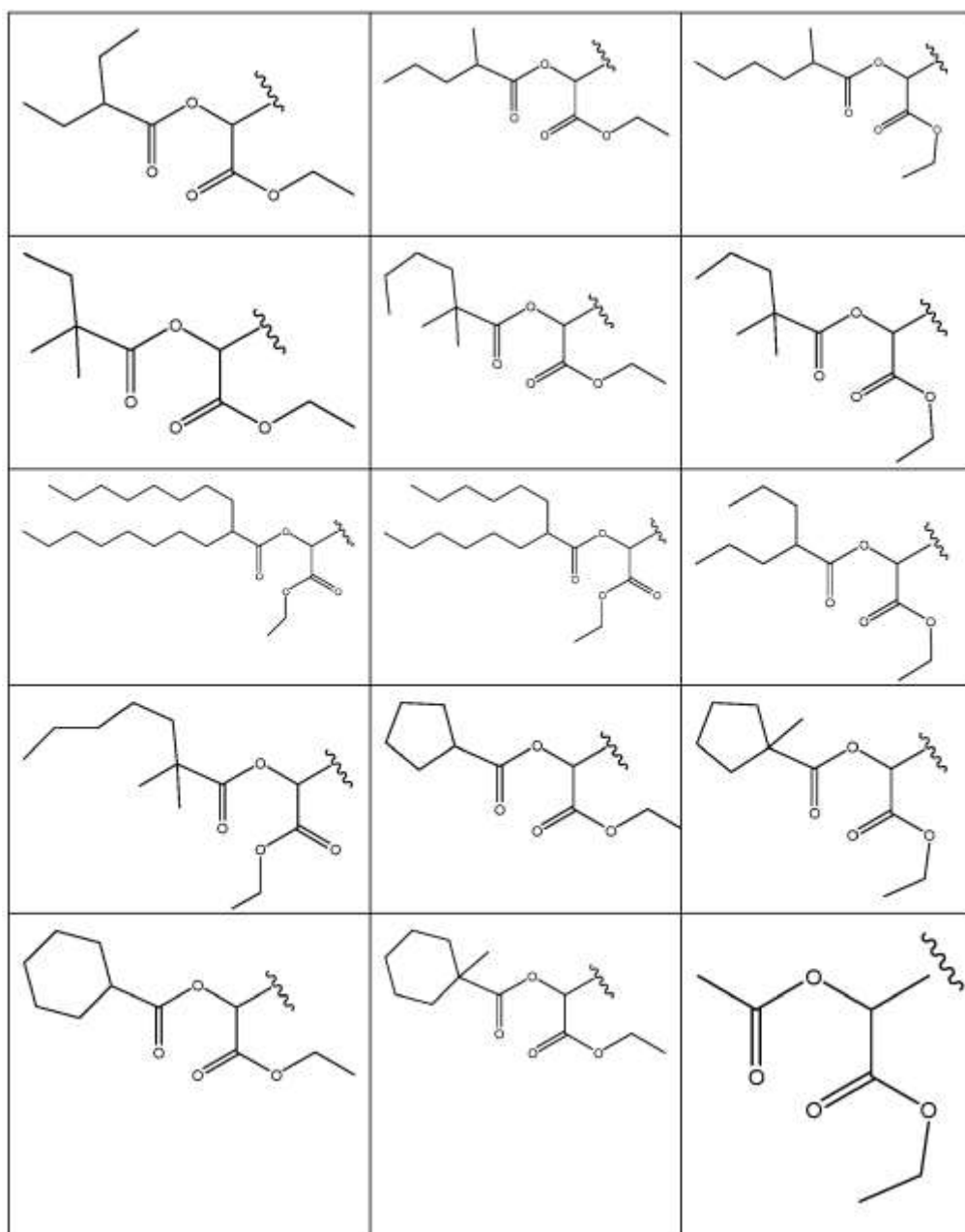


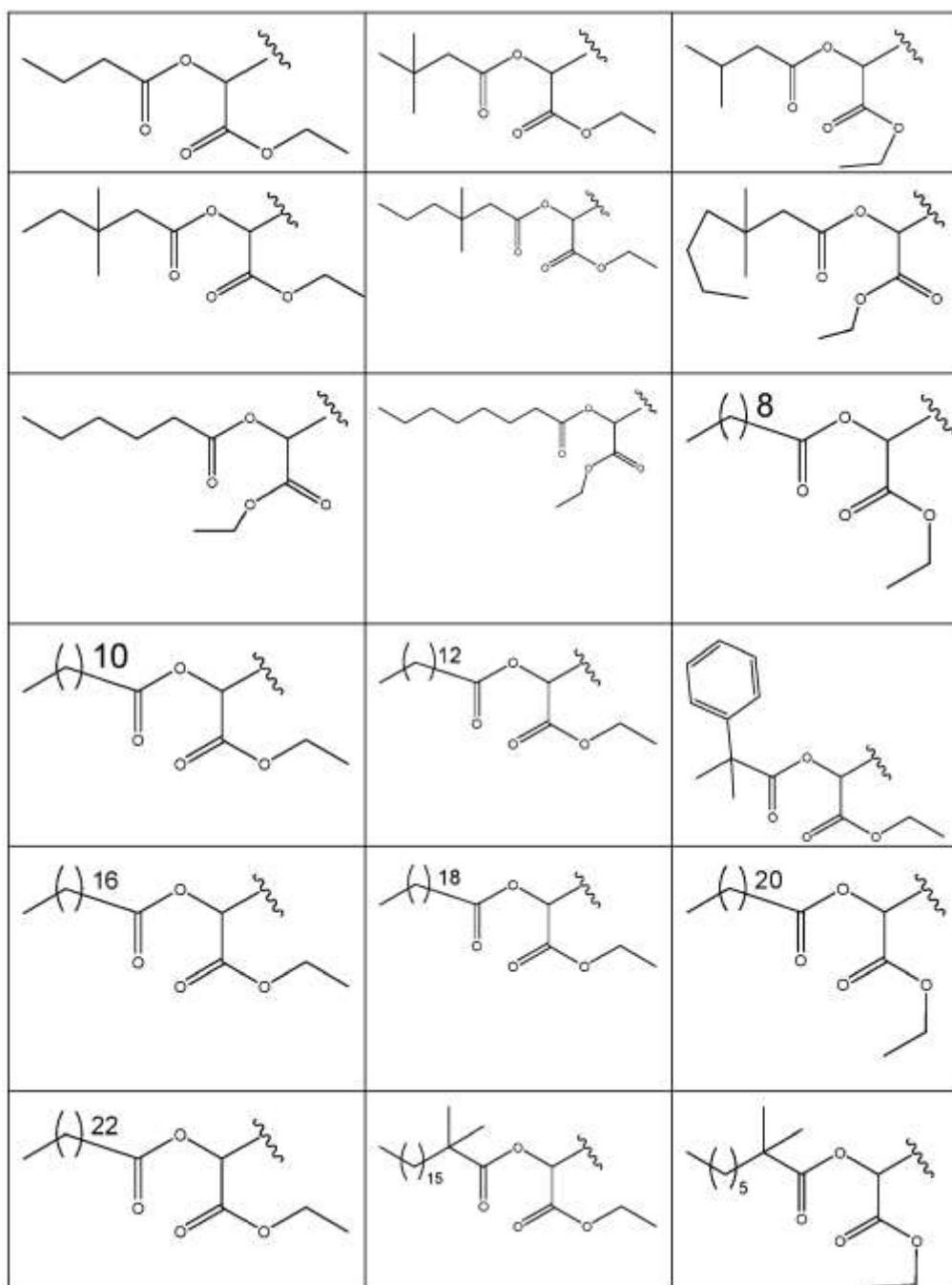


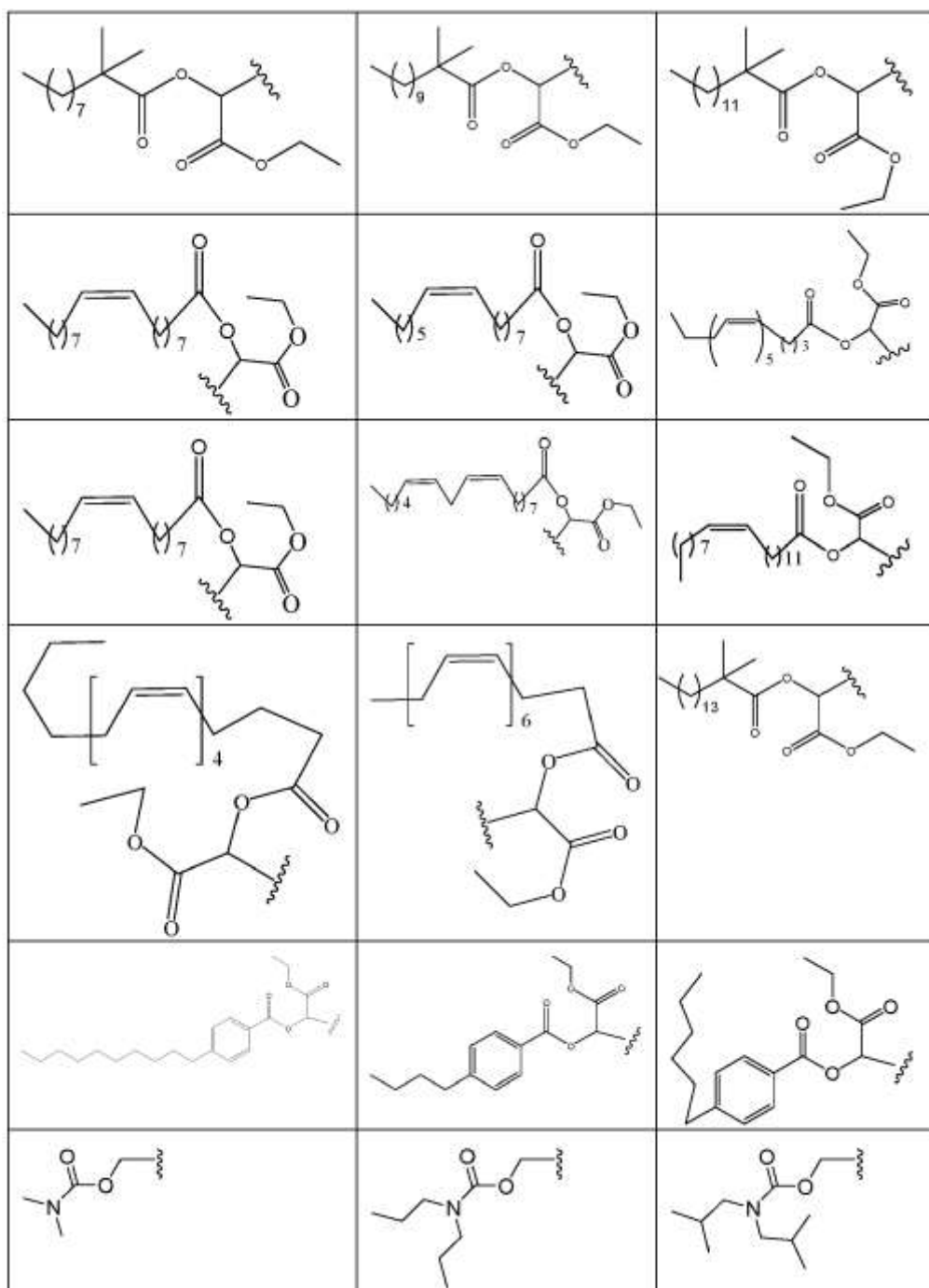


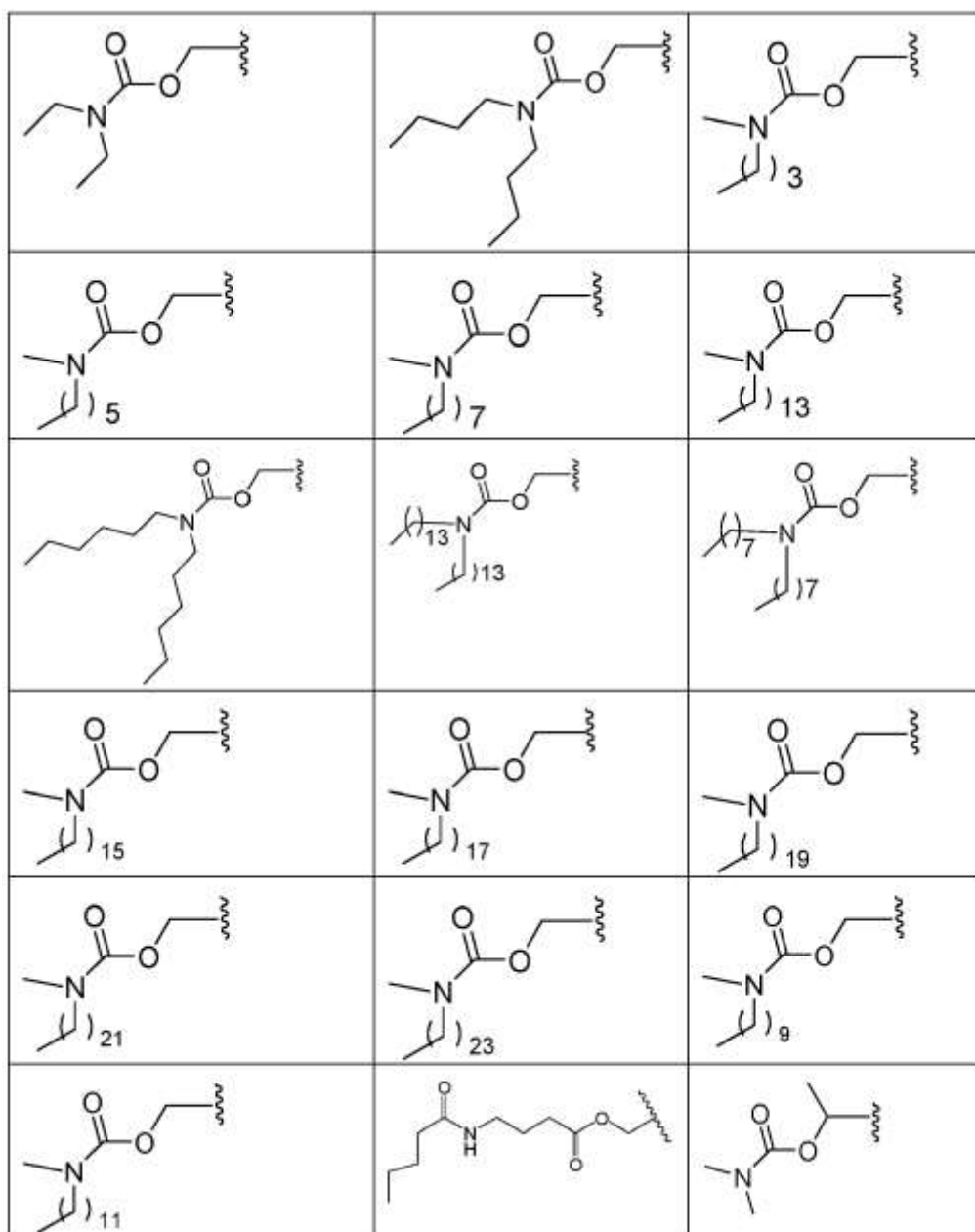


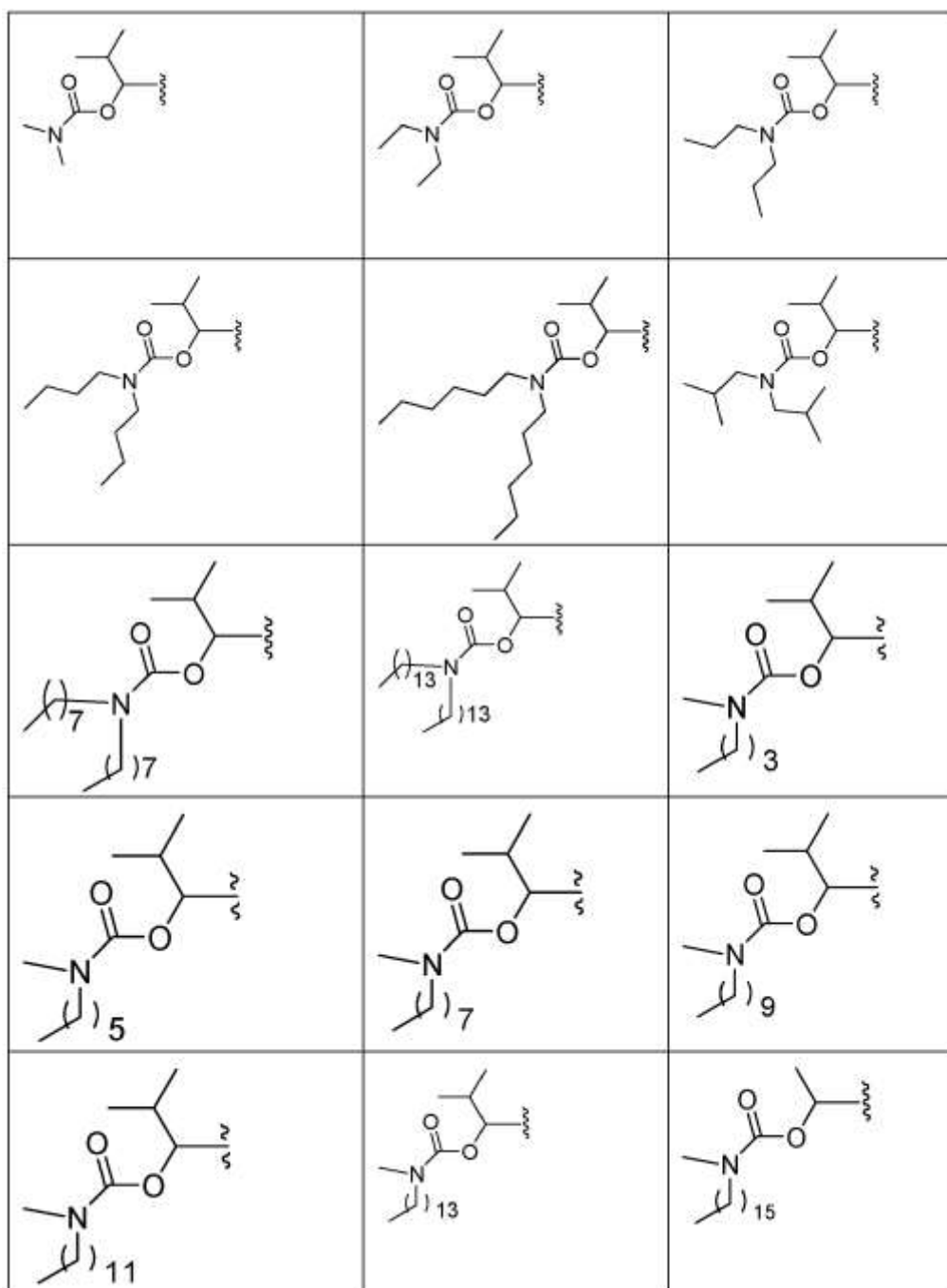


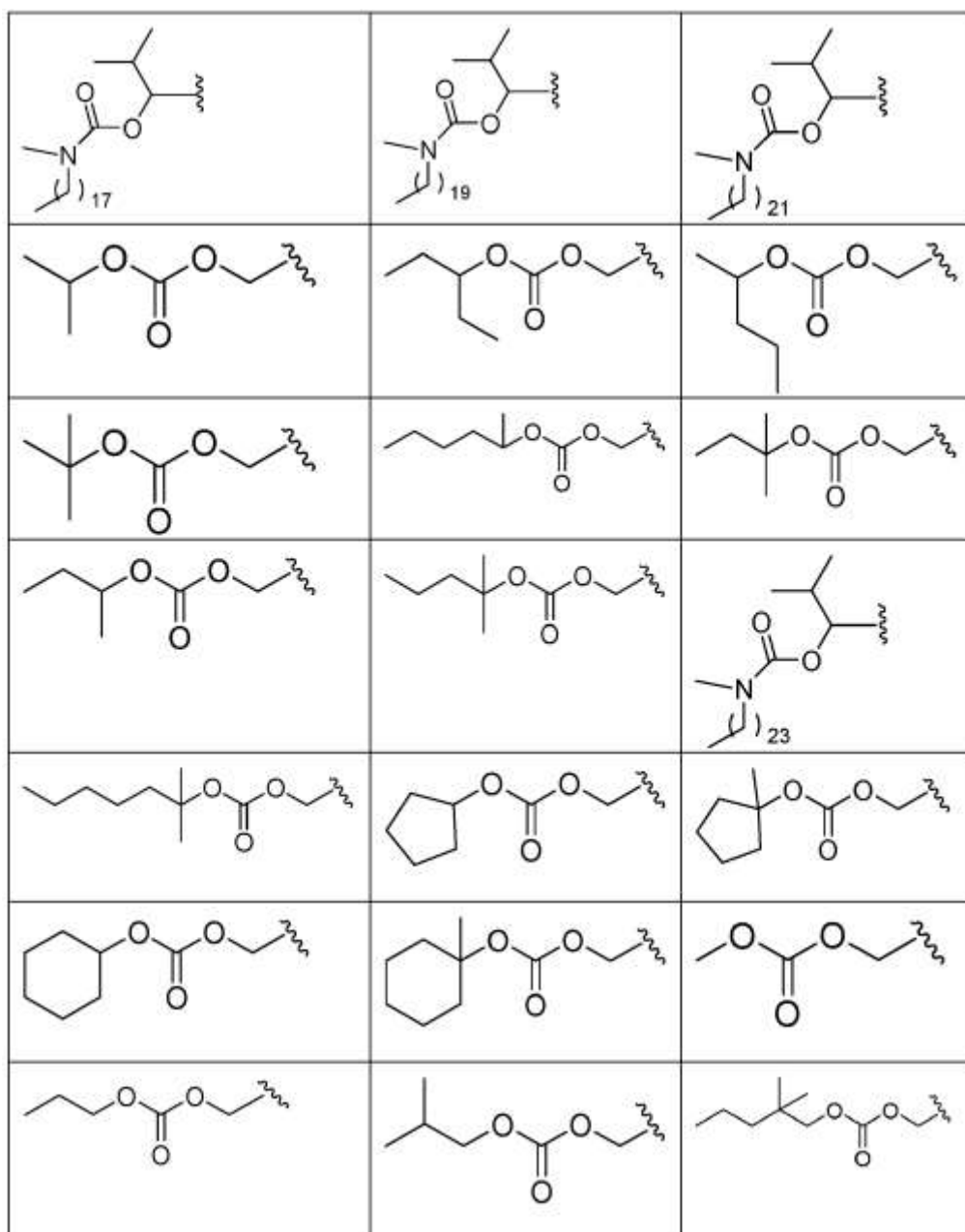


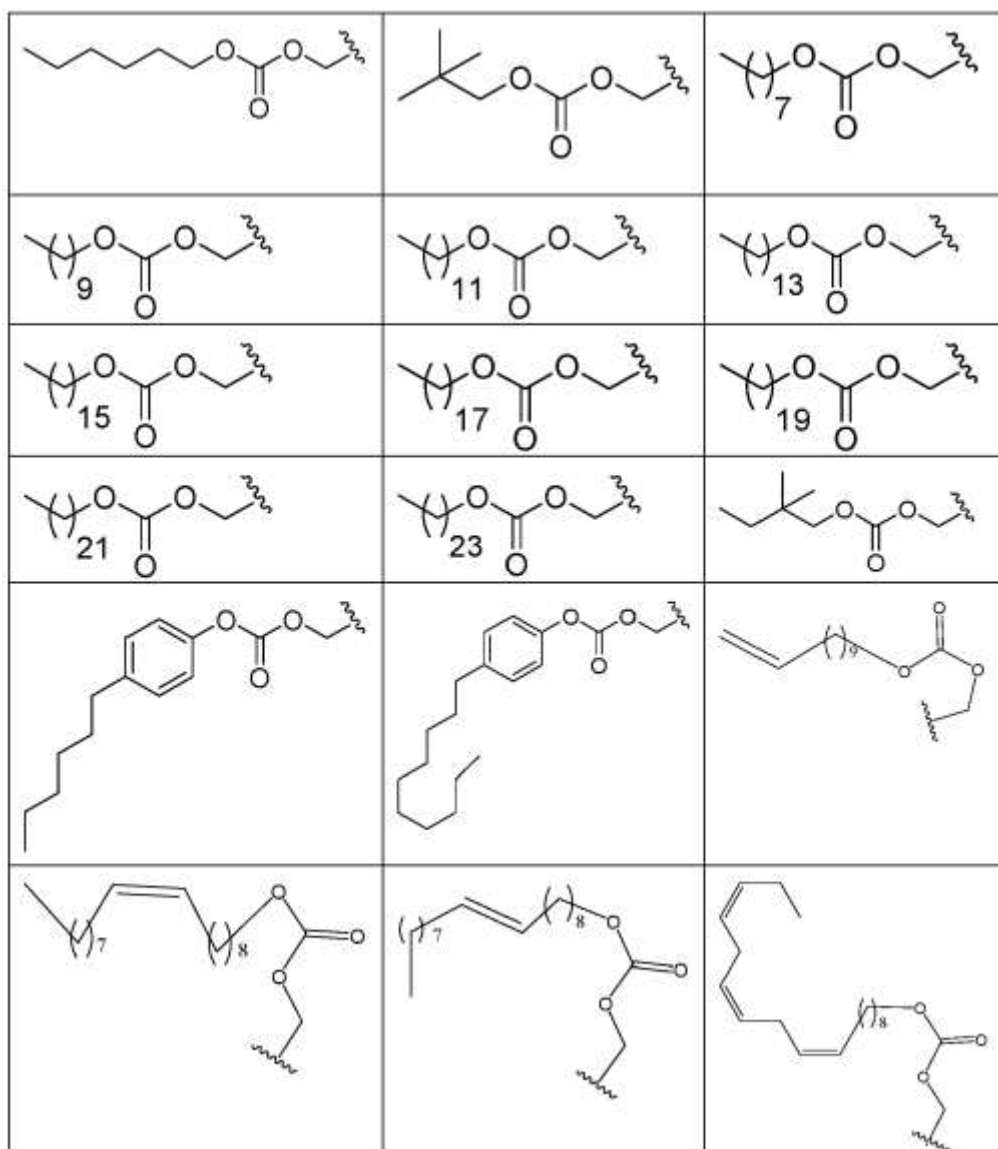


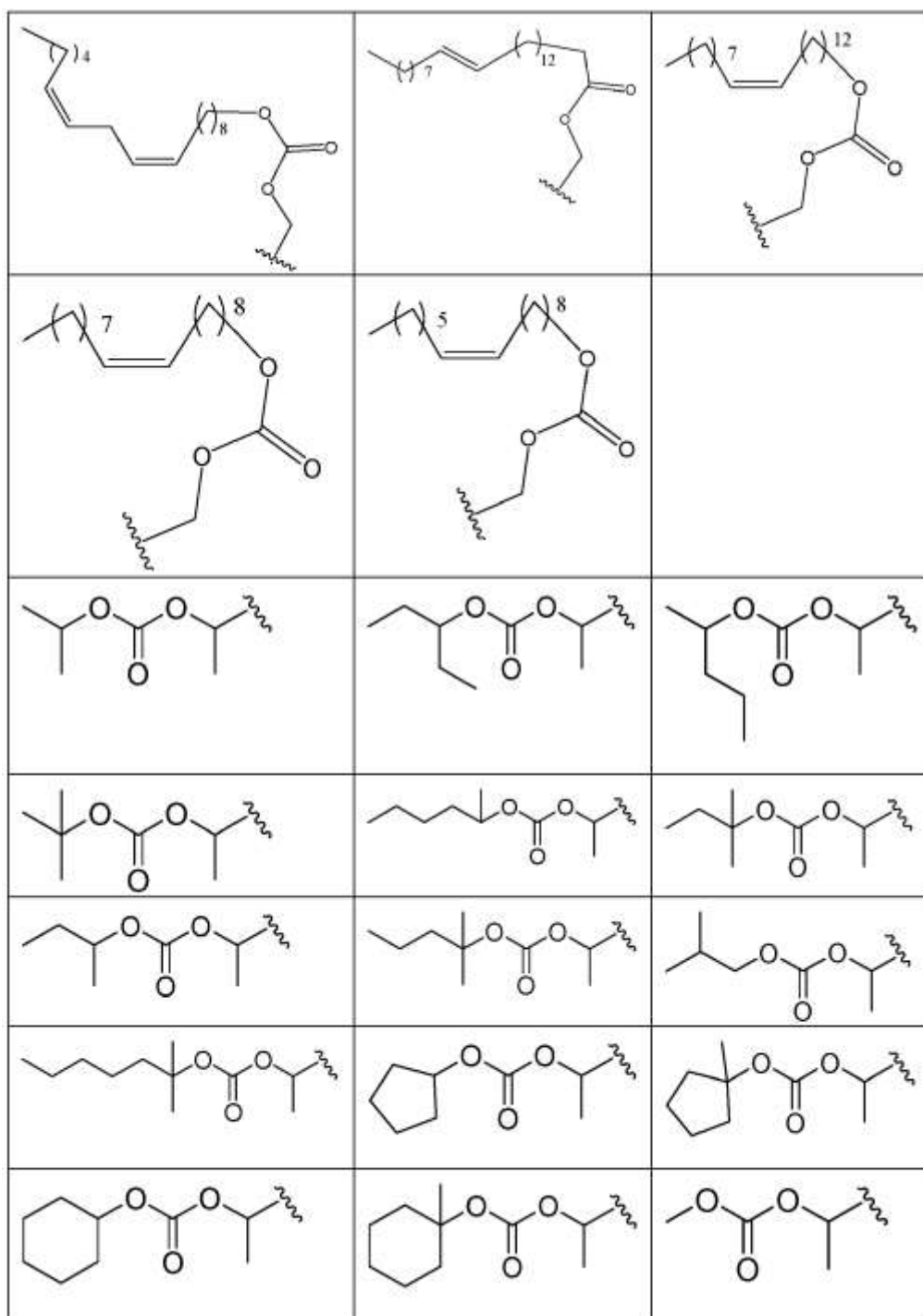


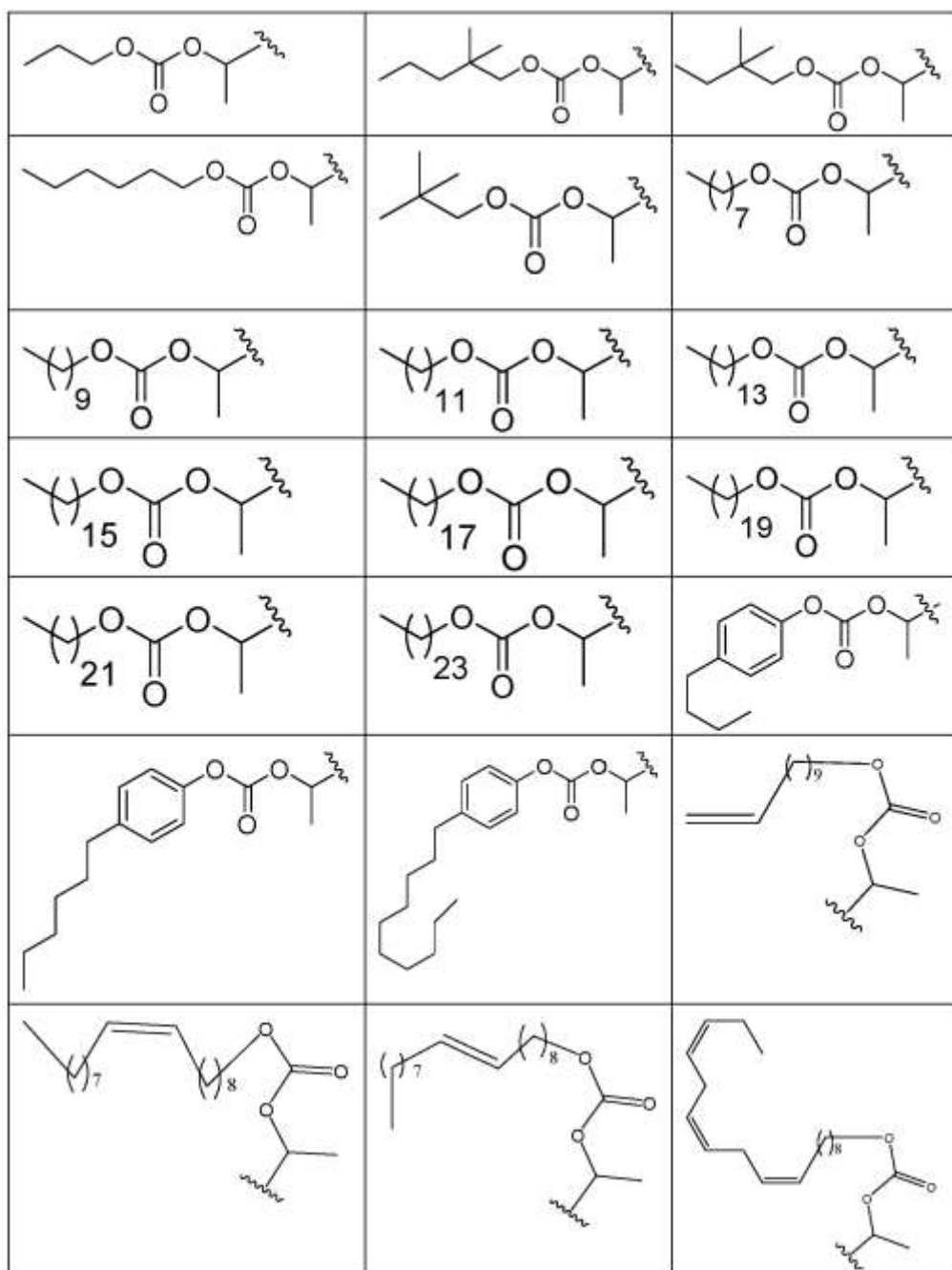


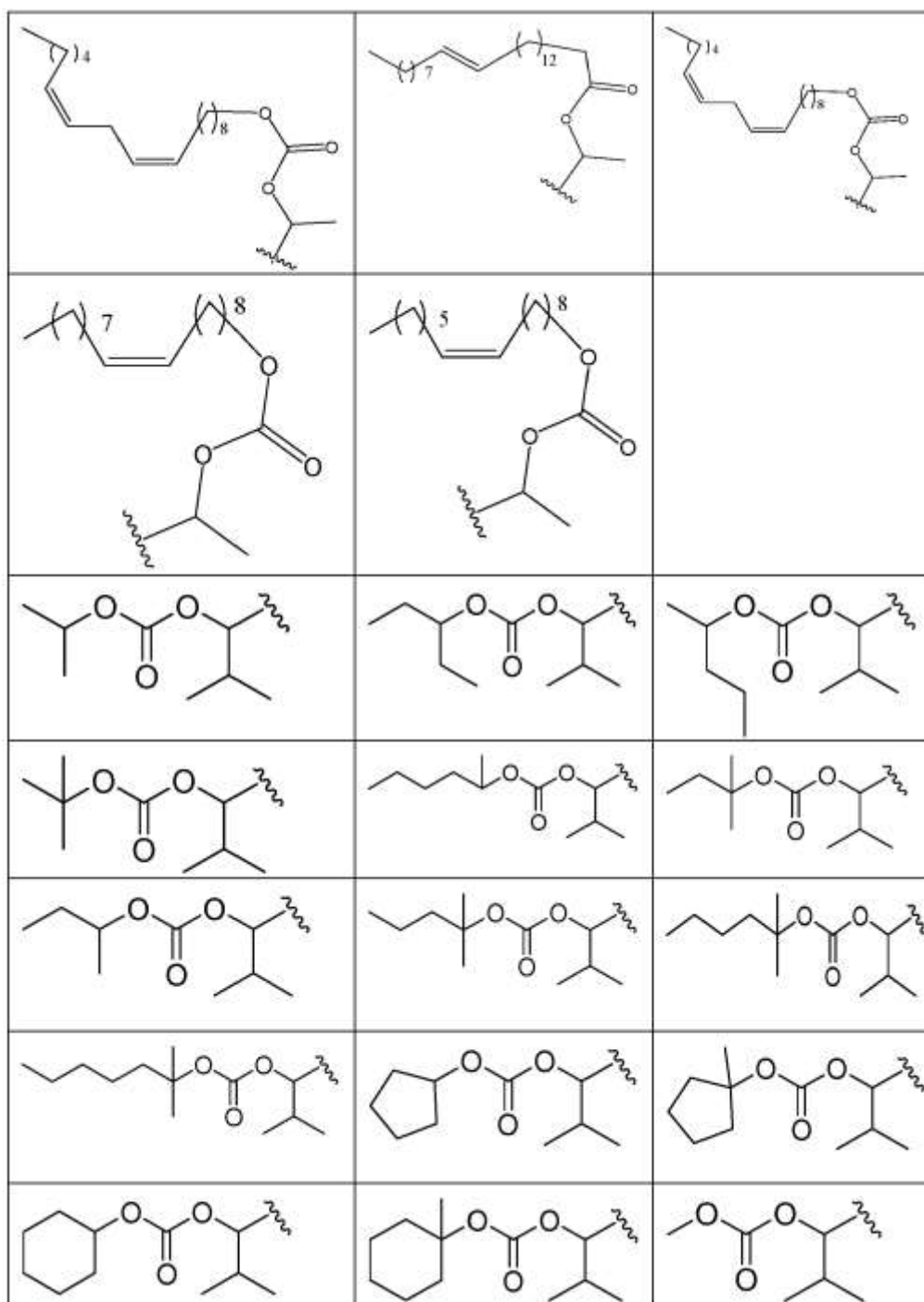


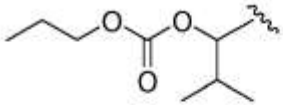
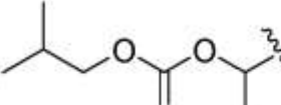
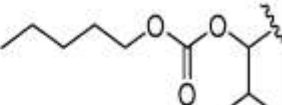
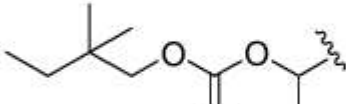
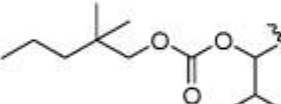
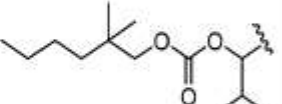
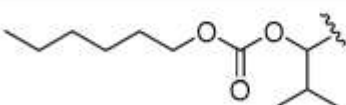
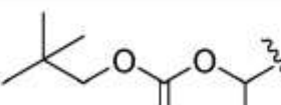
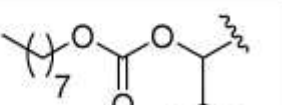
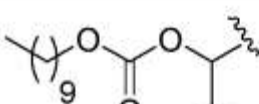
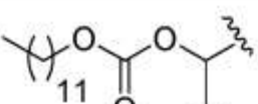
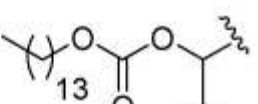
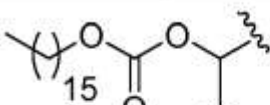
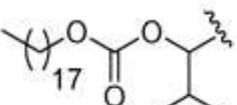
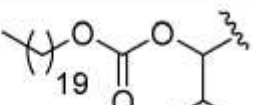
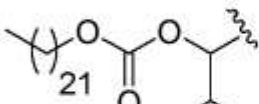
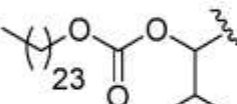
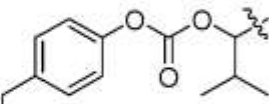
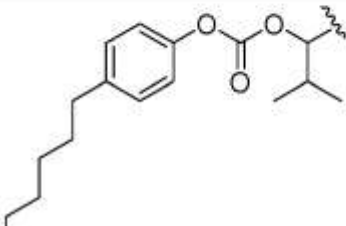
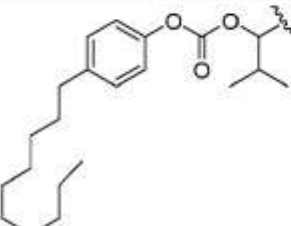
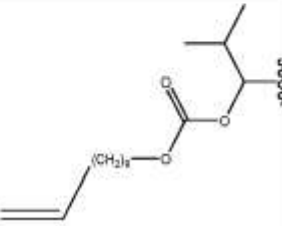


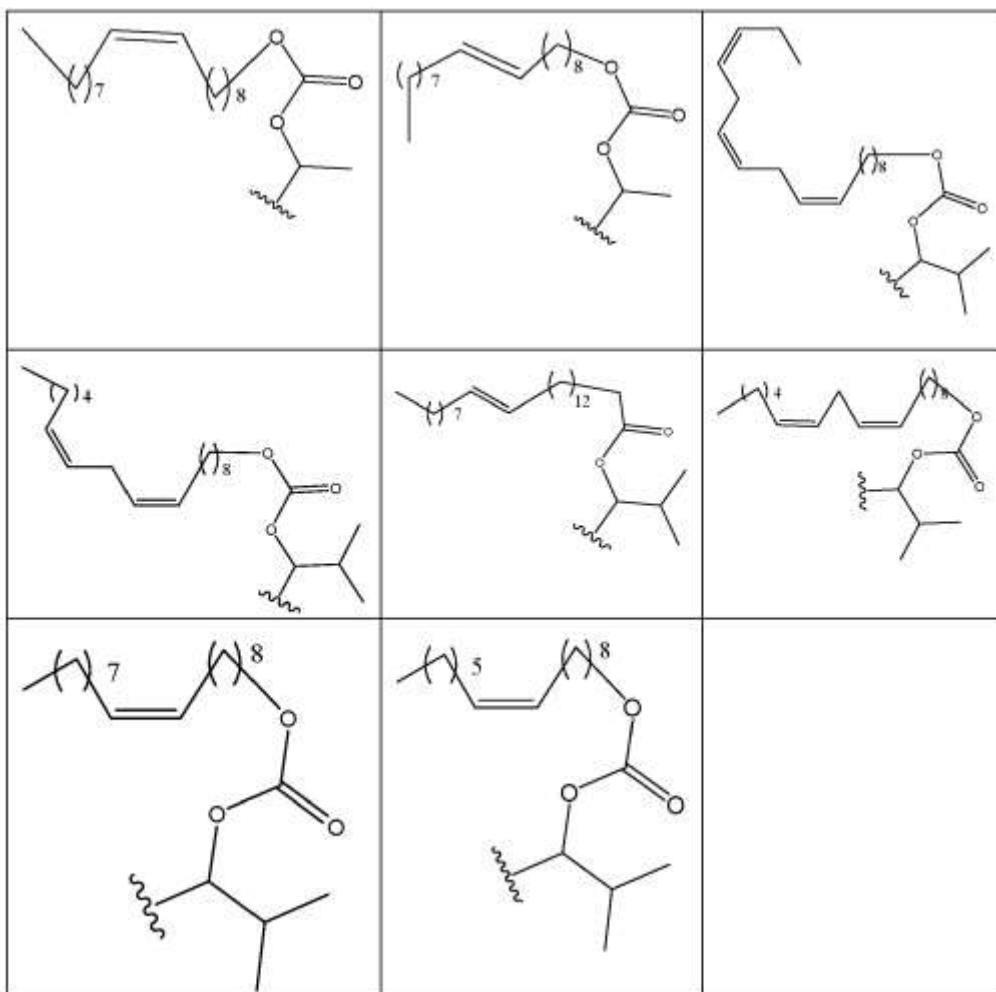






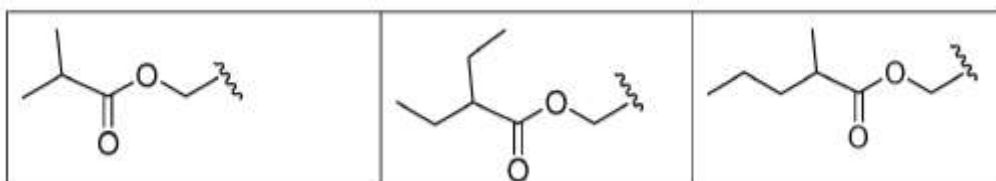


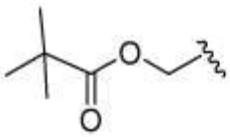
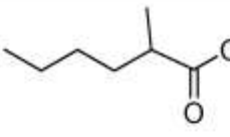
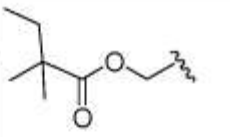
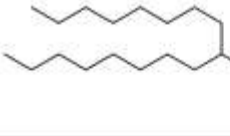
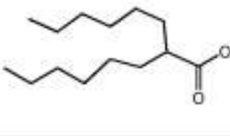
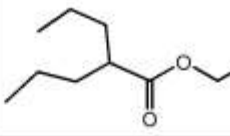
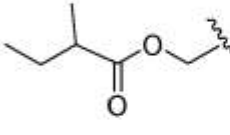
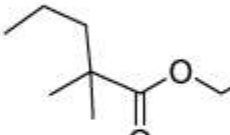
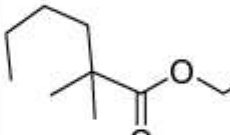
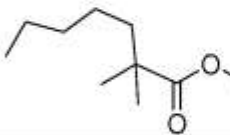
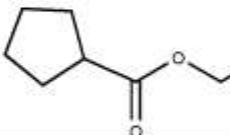
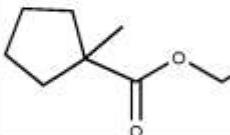
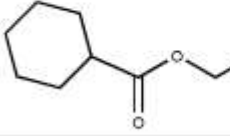
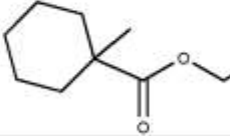
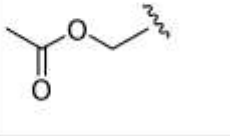
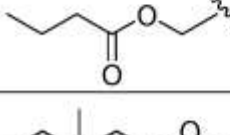
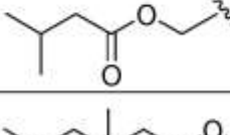
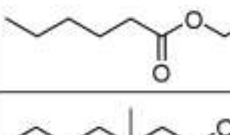
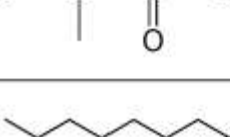
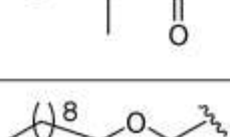
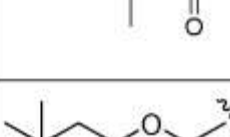
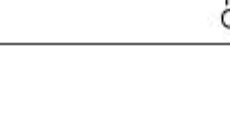
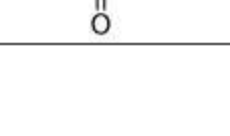
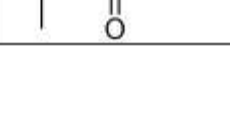
		
		
		
		
		
		
		

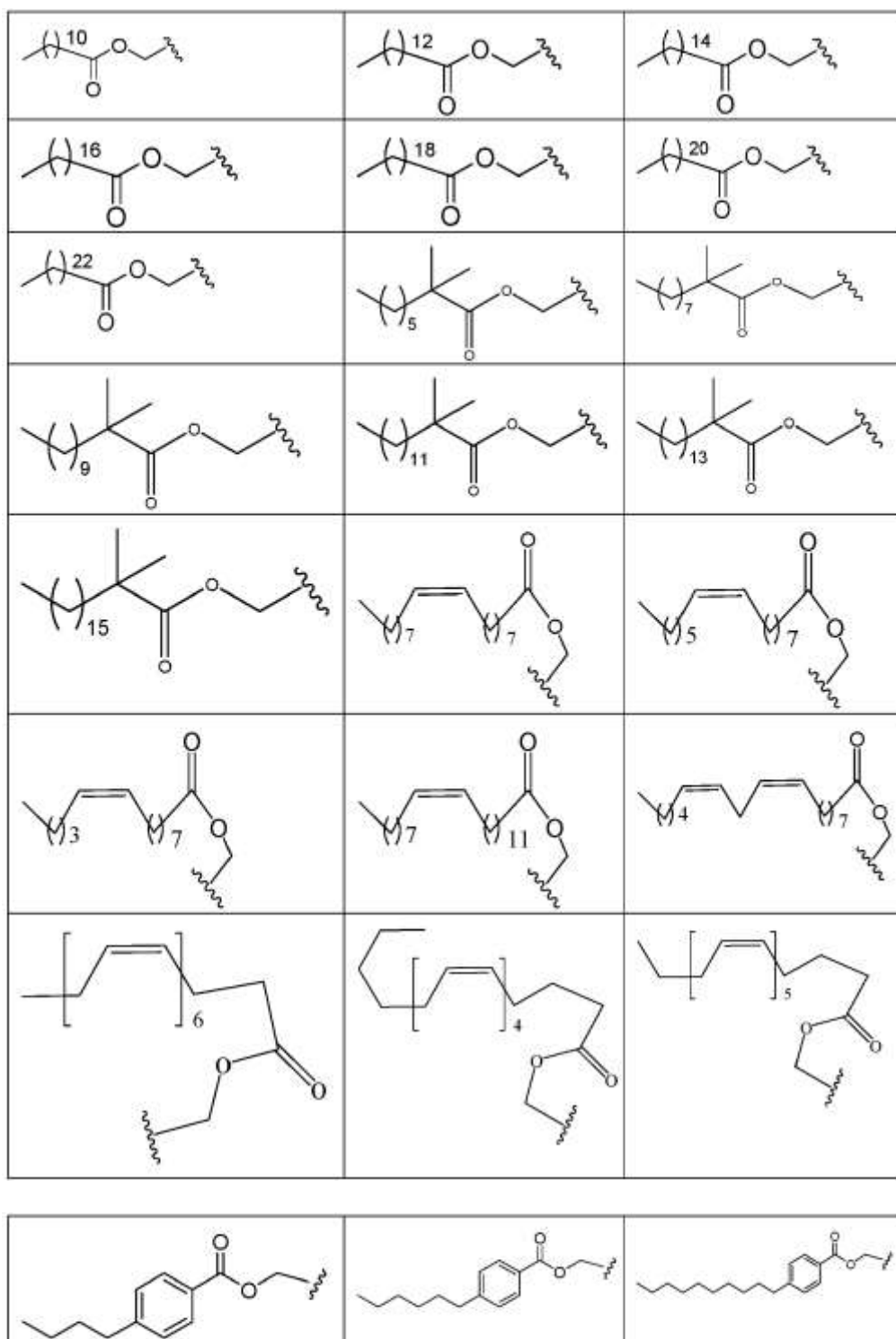


5. En forbindelse ifølge krav 1, hvor R_5 er valgt fra tabell 2, 3 eller 4:

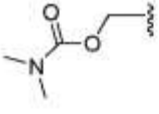
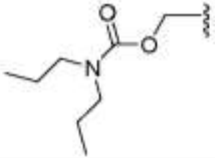
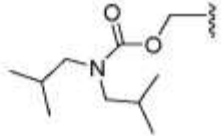
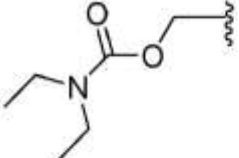
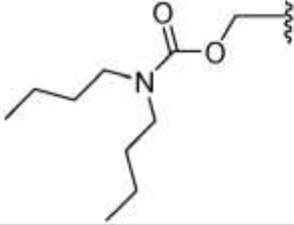
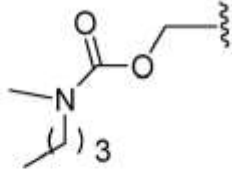
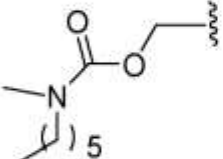
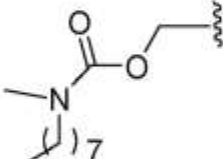
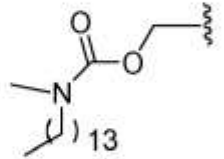
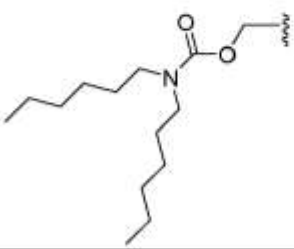
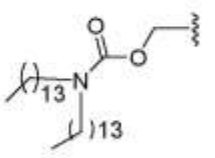
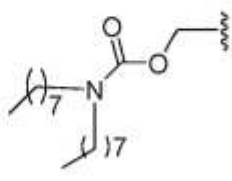
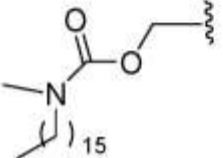
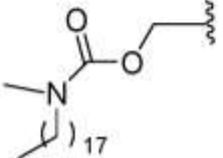
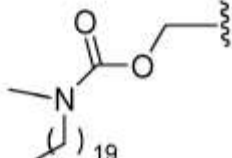
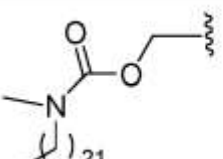
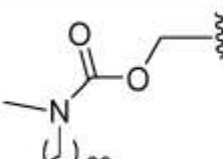
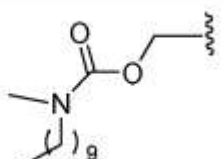
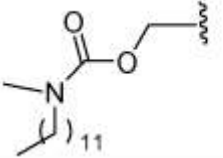
Tabell 2



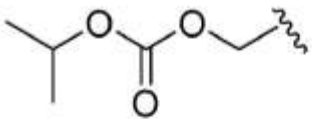
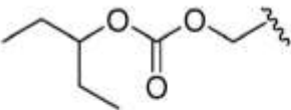
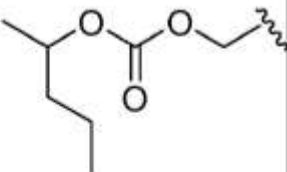
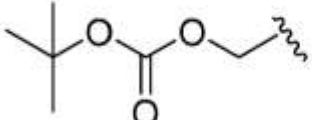
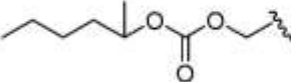
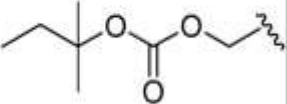
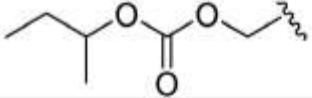
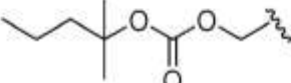
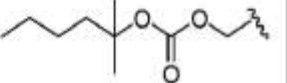
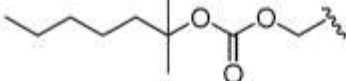
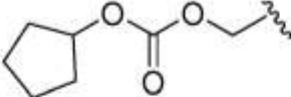
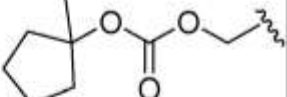
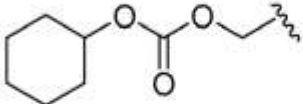
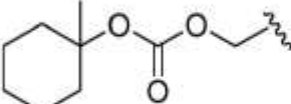
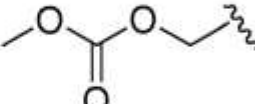
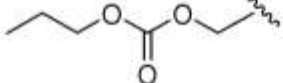
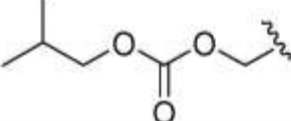
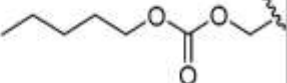
		
		
		
		
		
		
		
		
		

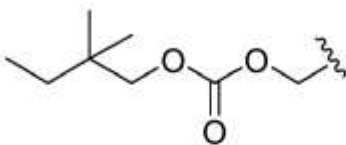
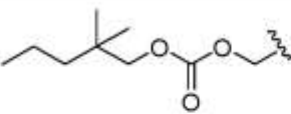
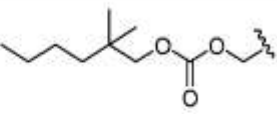
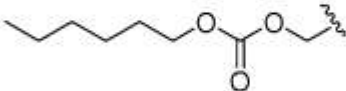
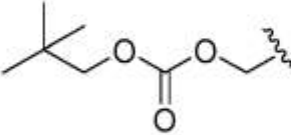
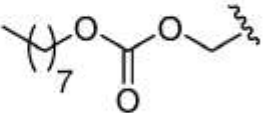
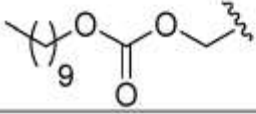
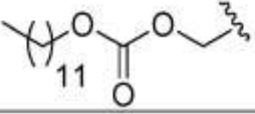
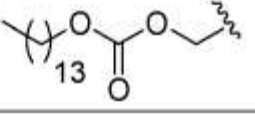
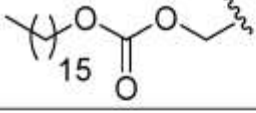
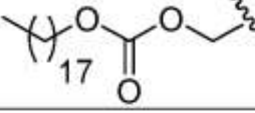
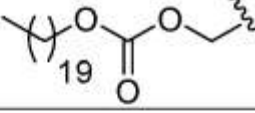
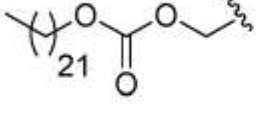
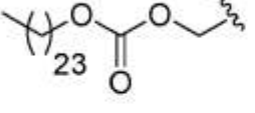
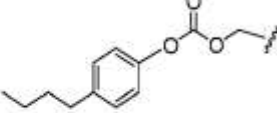
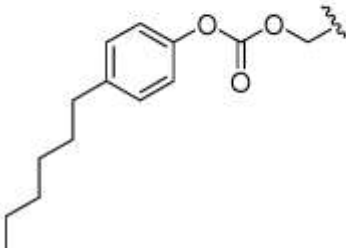
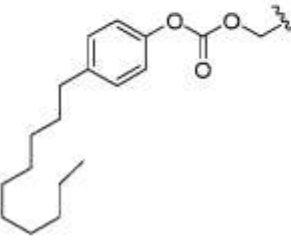
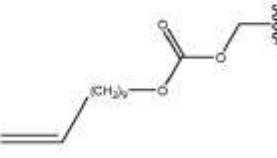


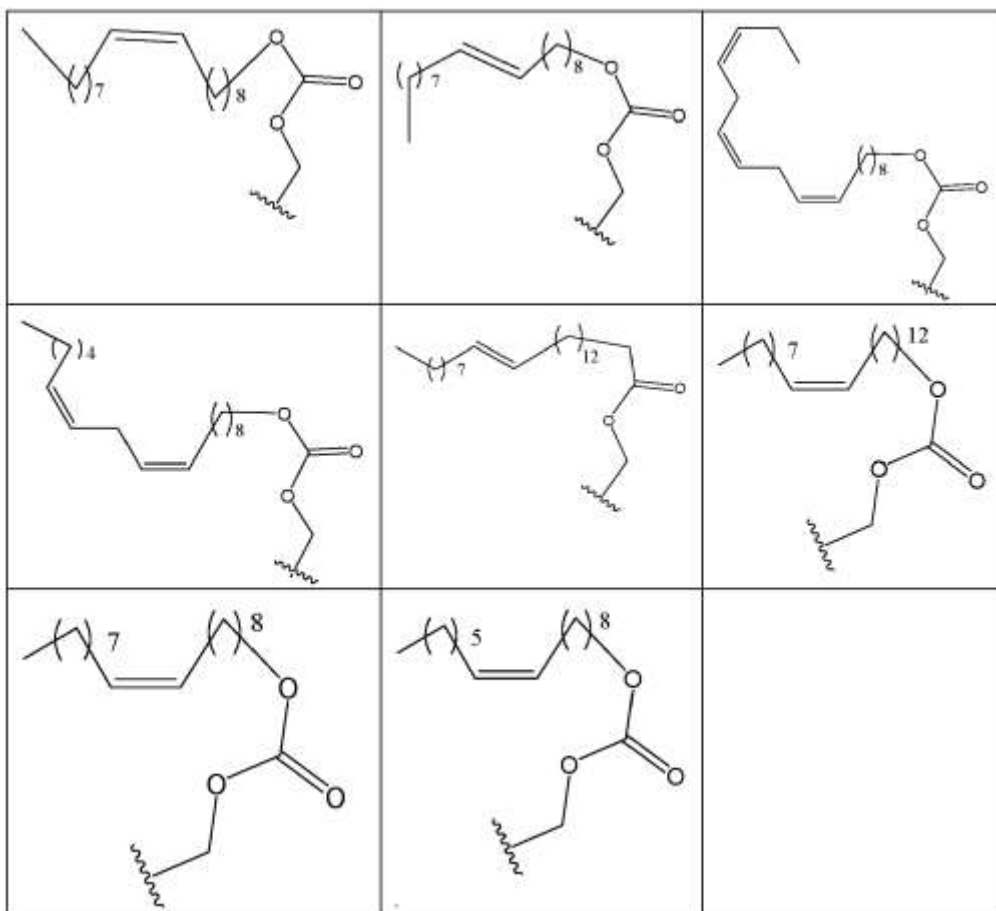
Tabell 3

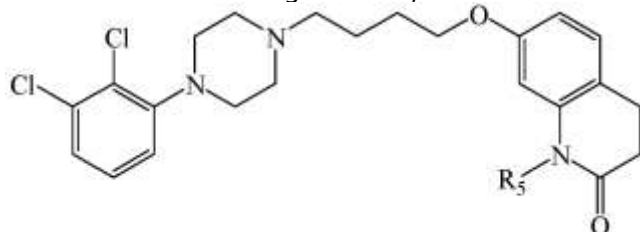
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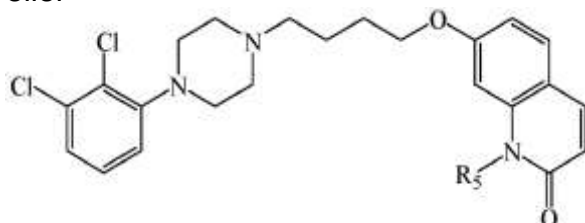
		
		
		
		
		
		



6. En forbindelse ifølge krav 1, med formel:

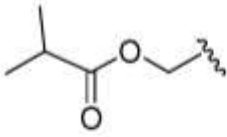
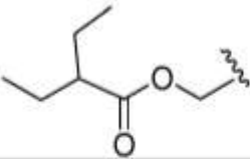
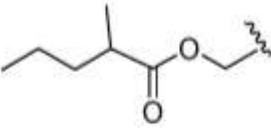
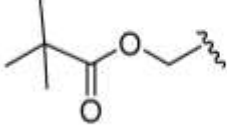
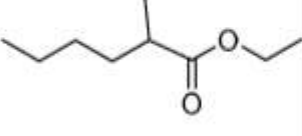
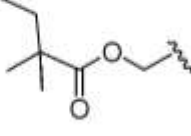
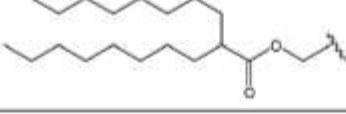
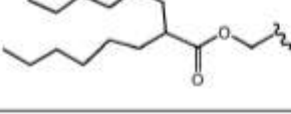
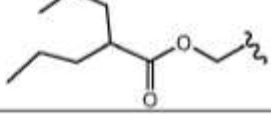
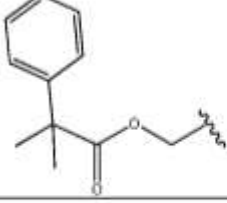
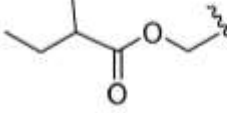
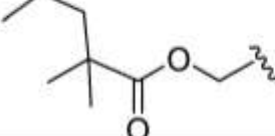
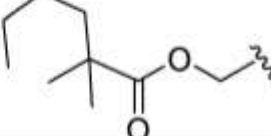


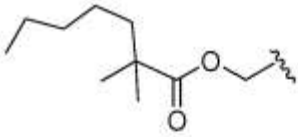
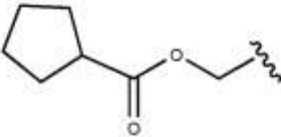
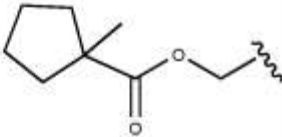
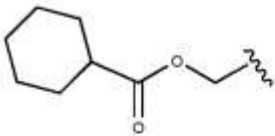
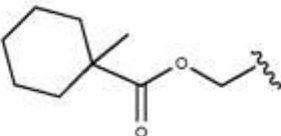
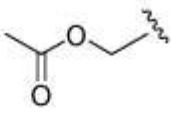
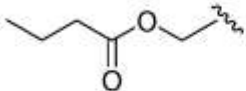
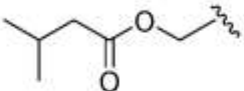
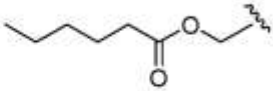
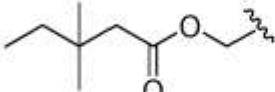
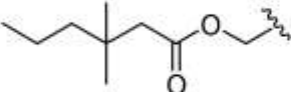
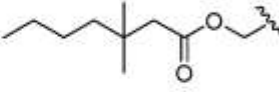
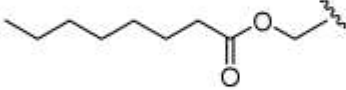
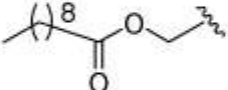
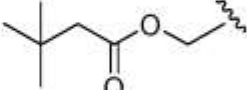
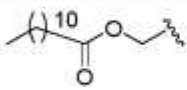
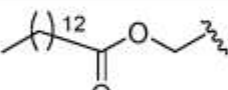
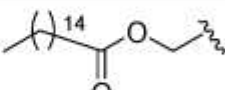
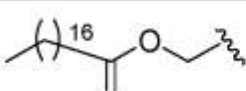
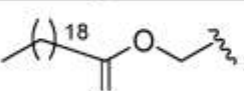
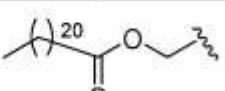
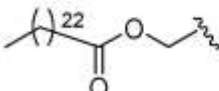
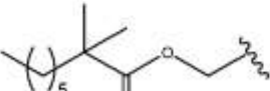
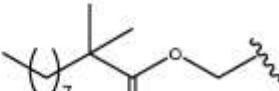
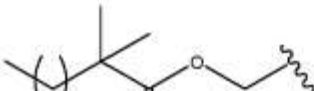
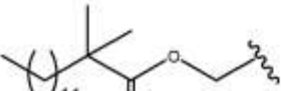
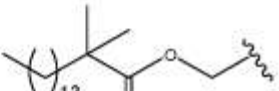
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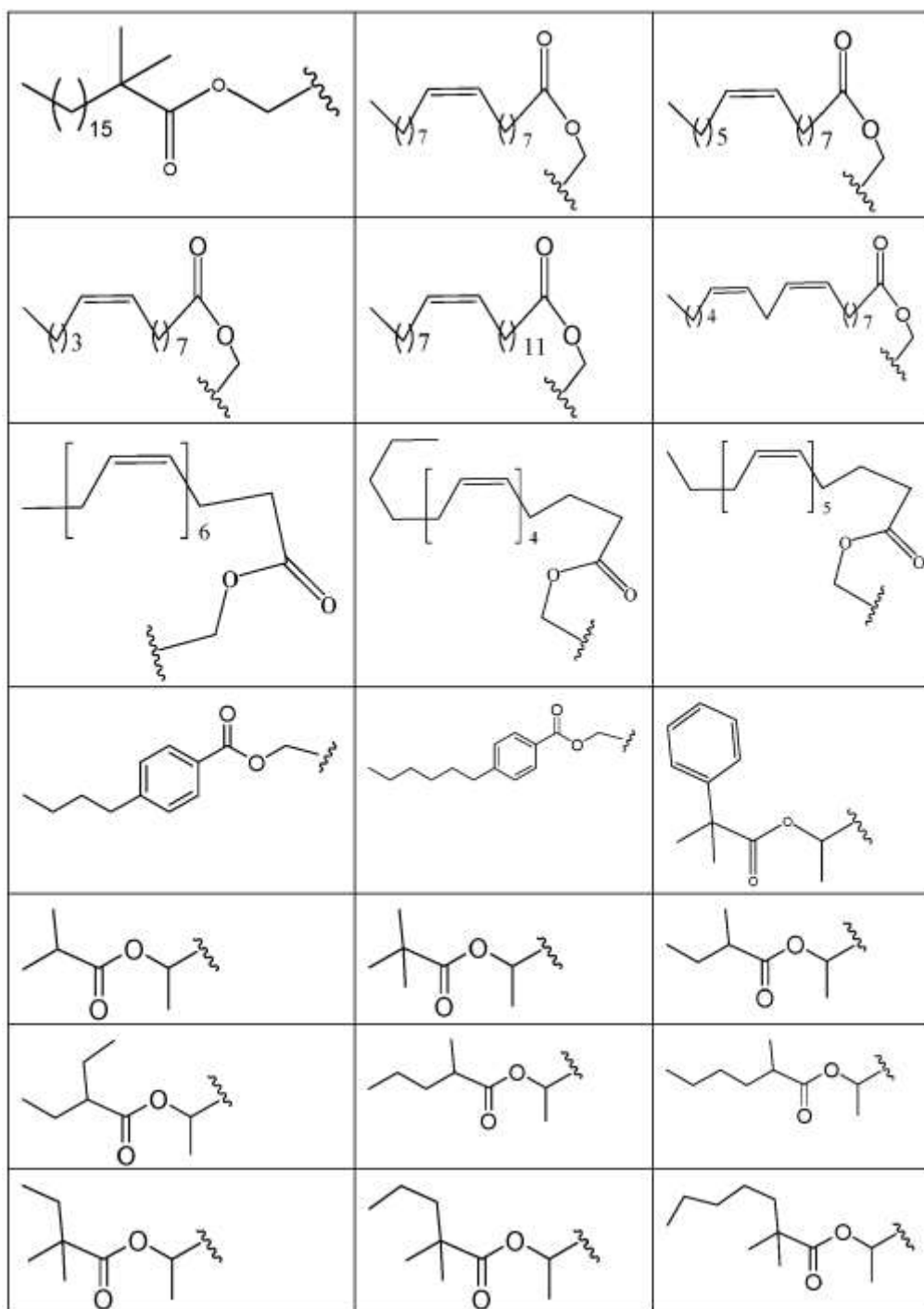


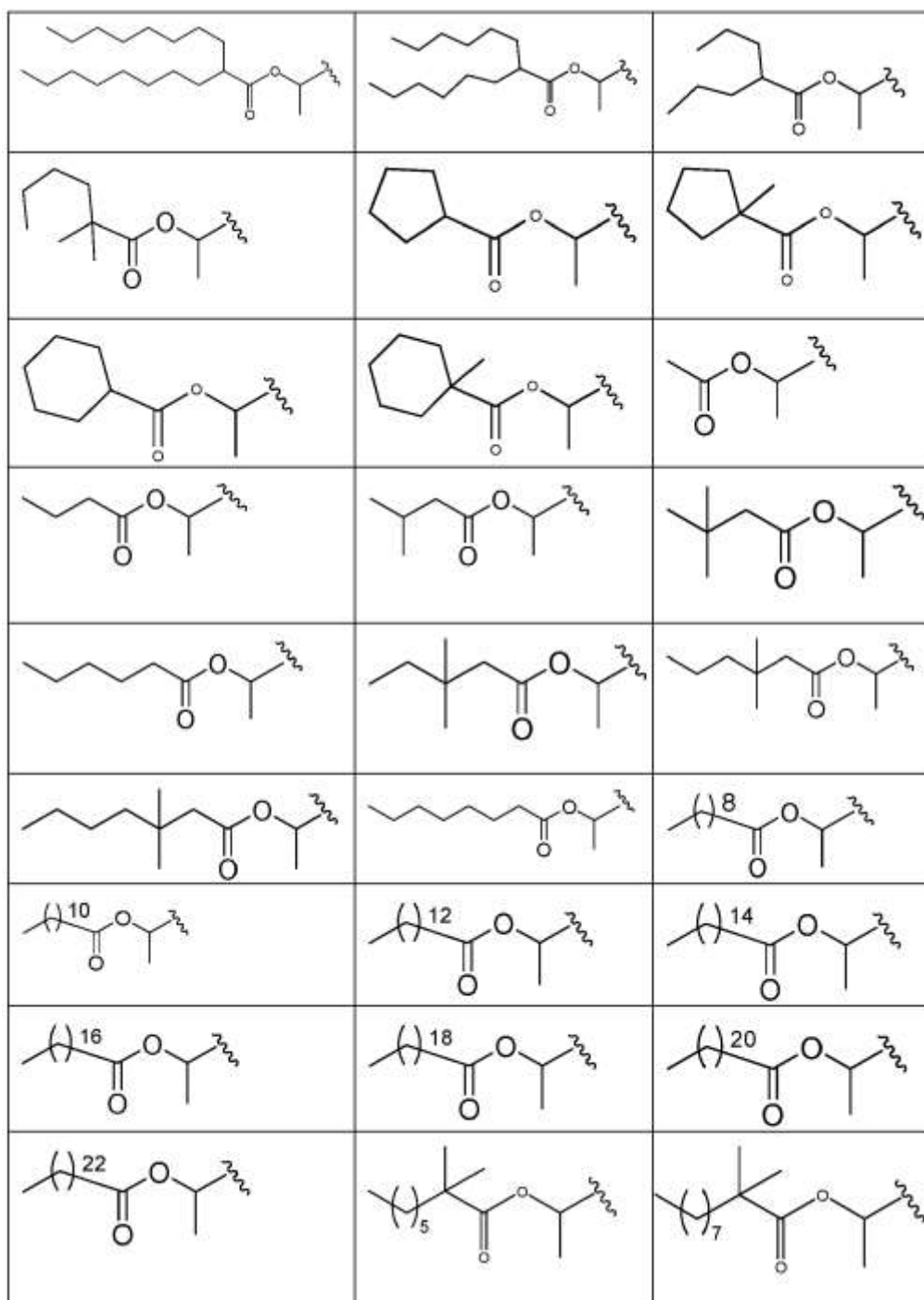
eller dens geometriske isomerer, enantiomerer, diastereomerer, racemater, farmasøytisk akseptable salter og solvater derav:
hvor R₅ er valgt fra tabell 1:

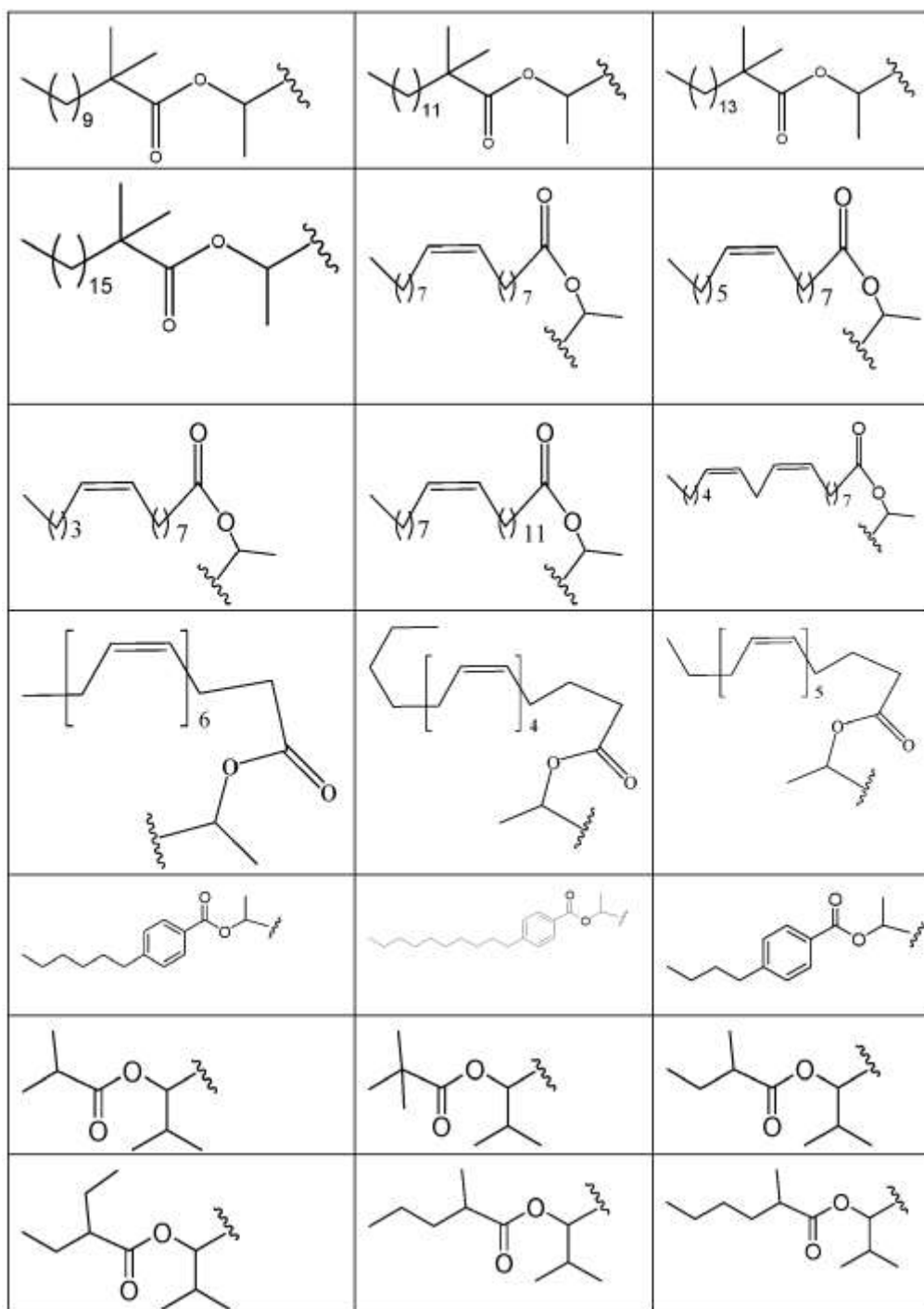
Tabell 1

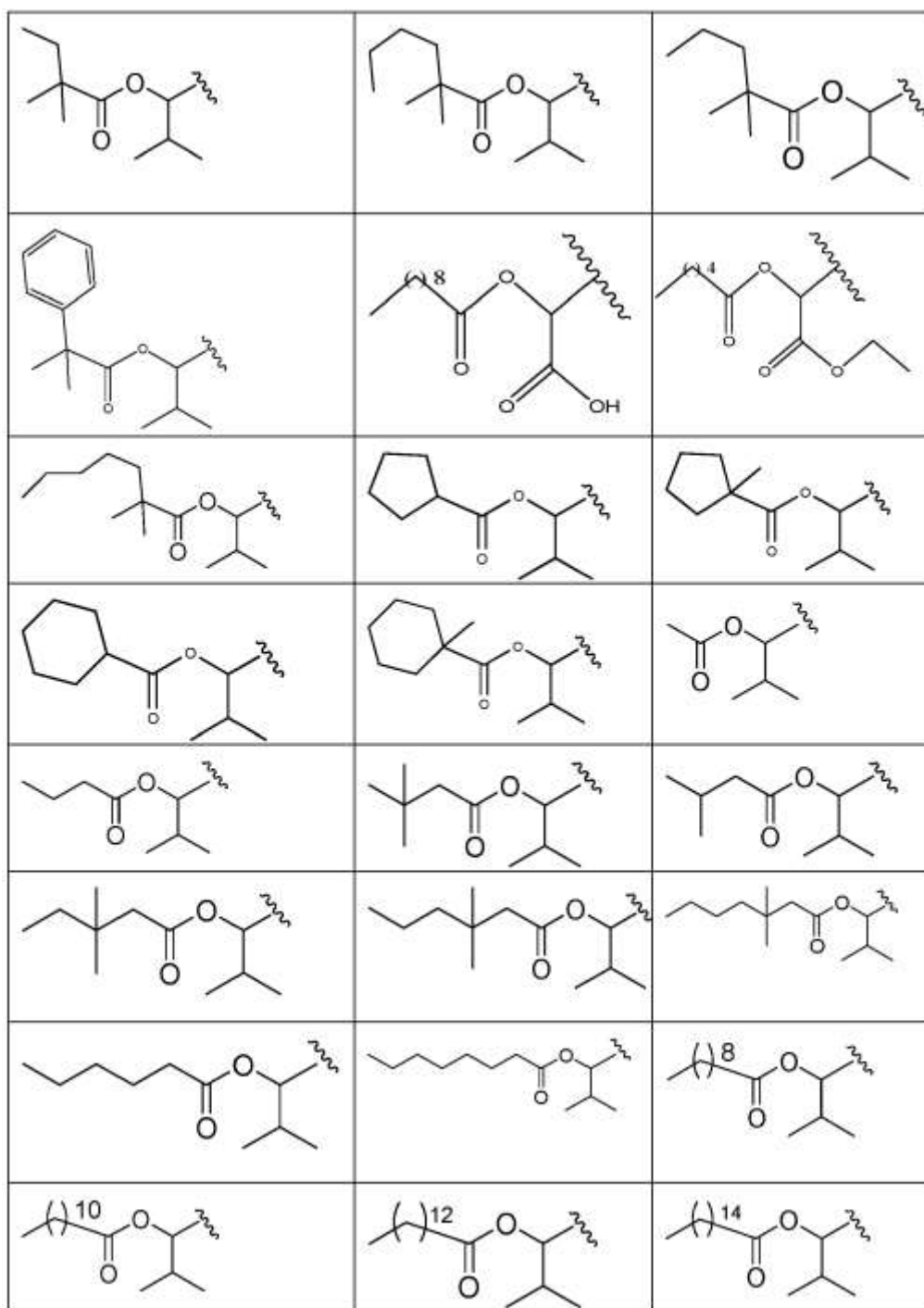
		
		
		
		
		

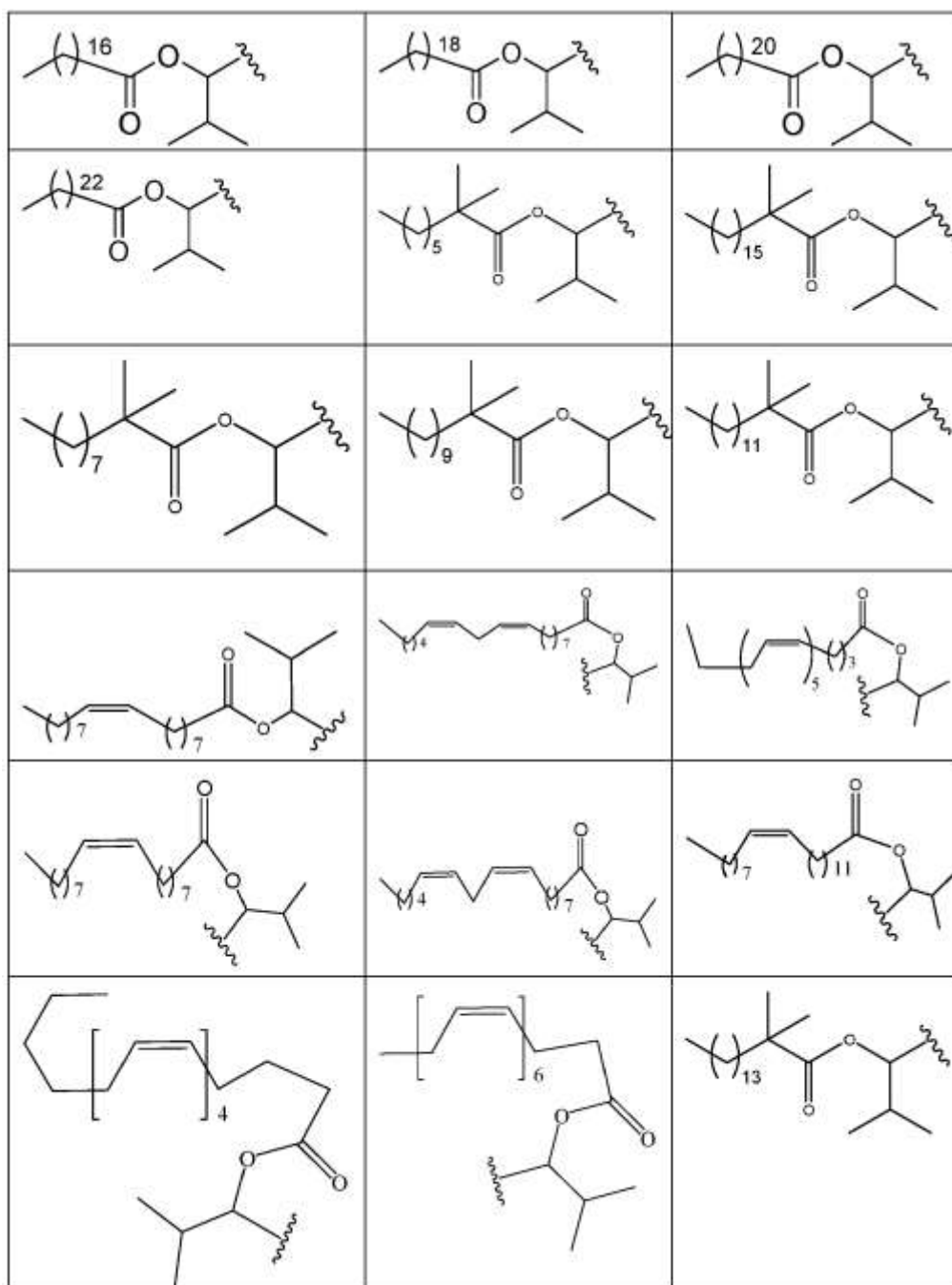
		
		
		
		
		
		
		
		
		

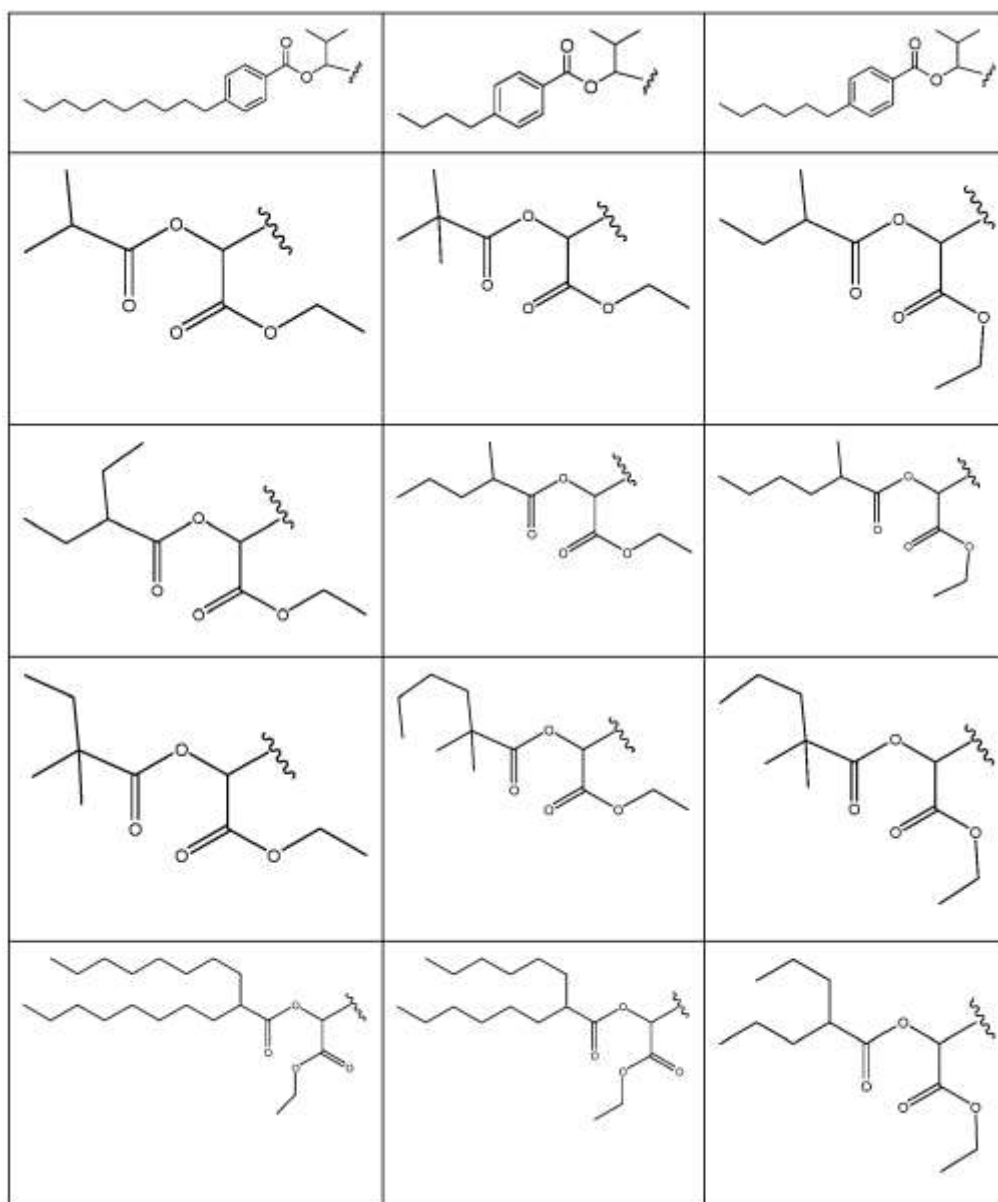


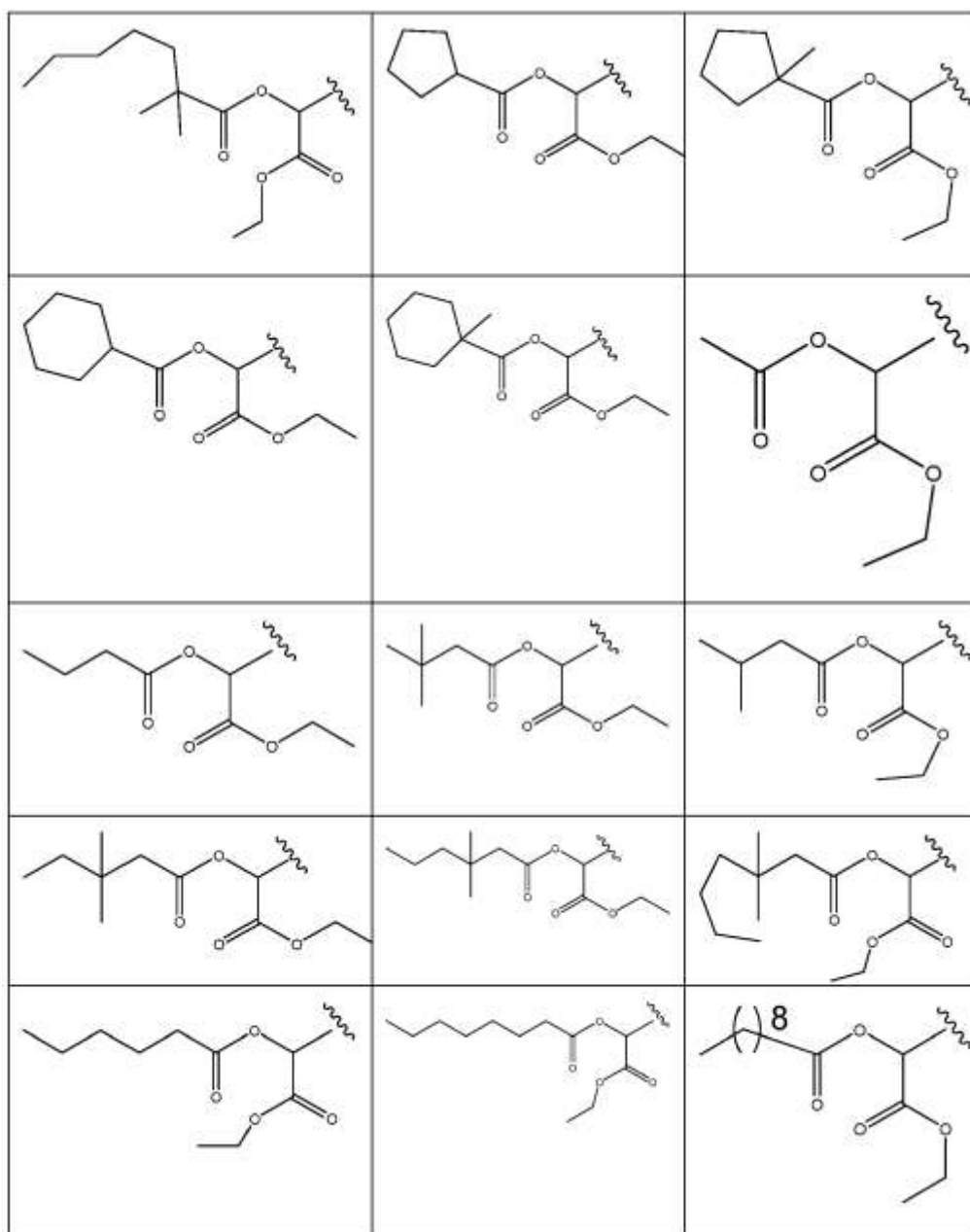


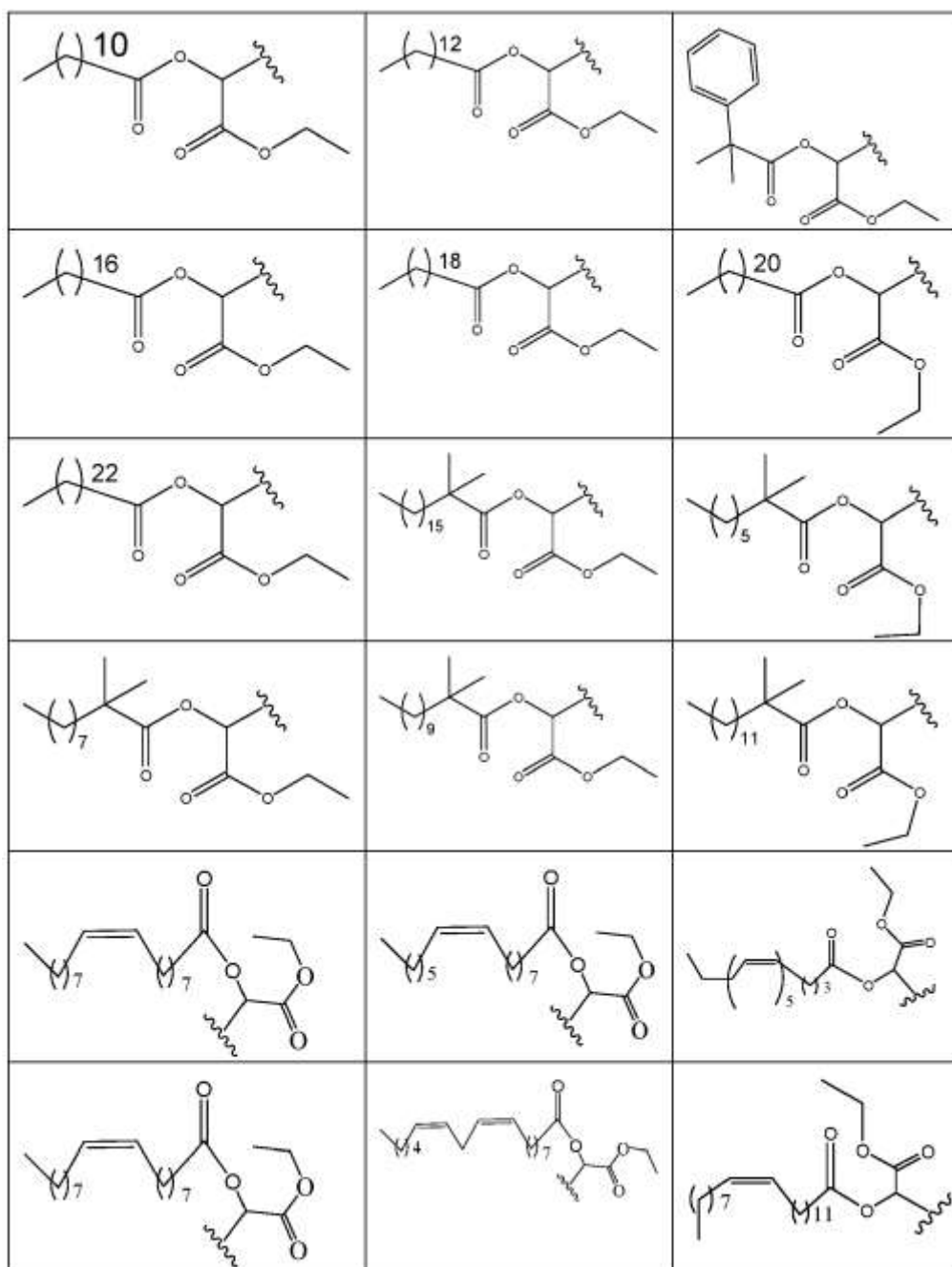


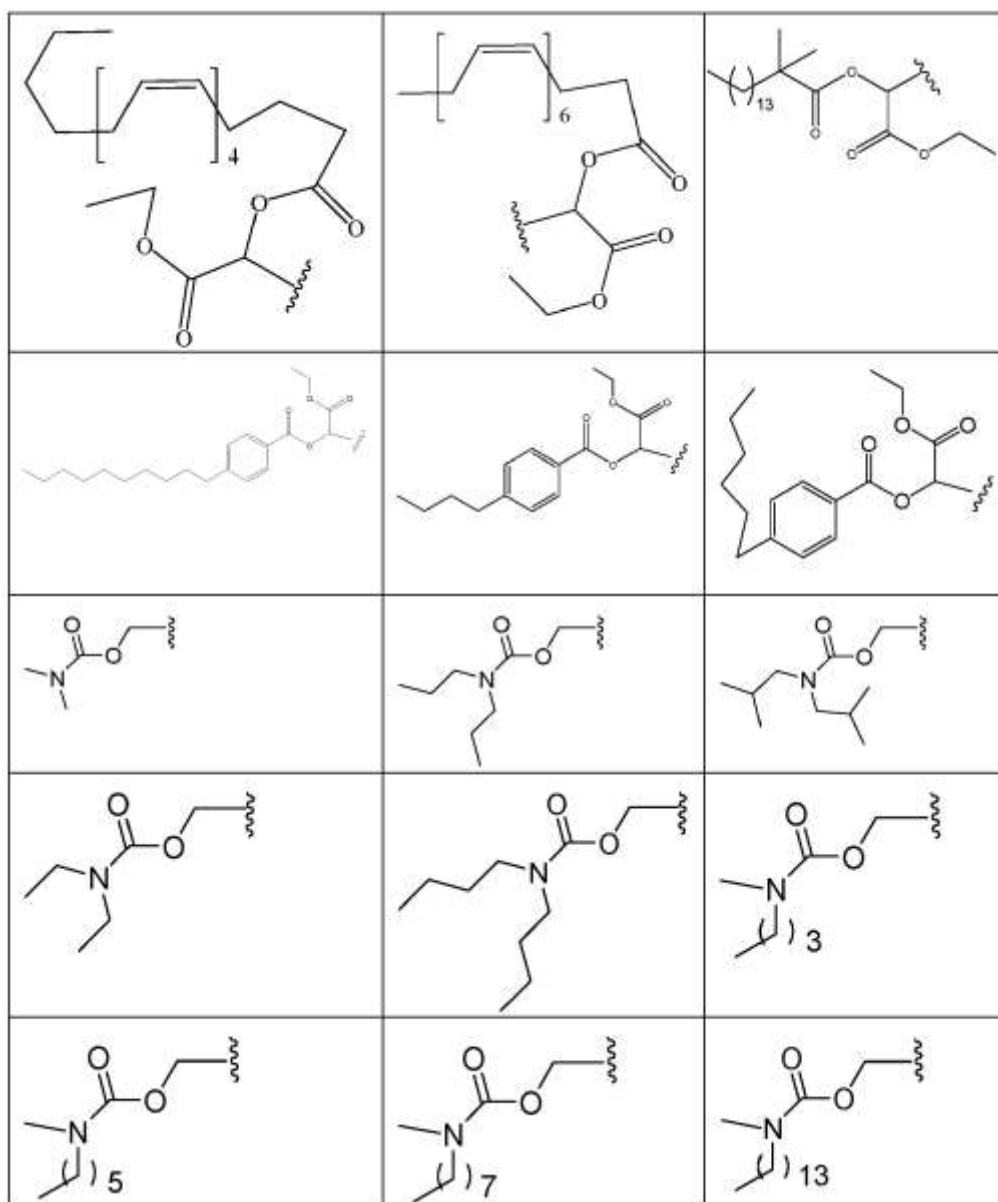


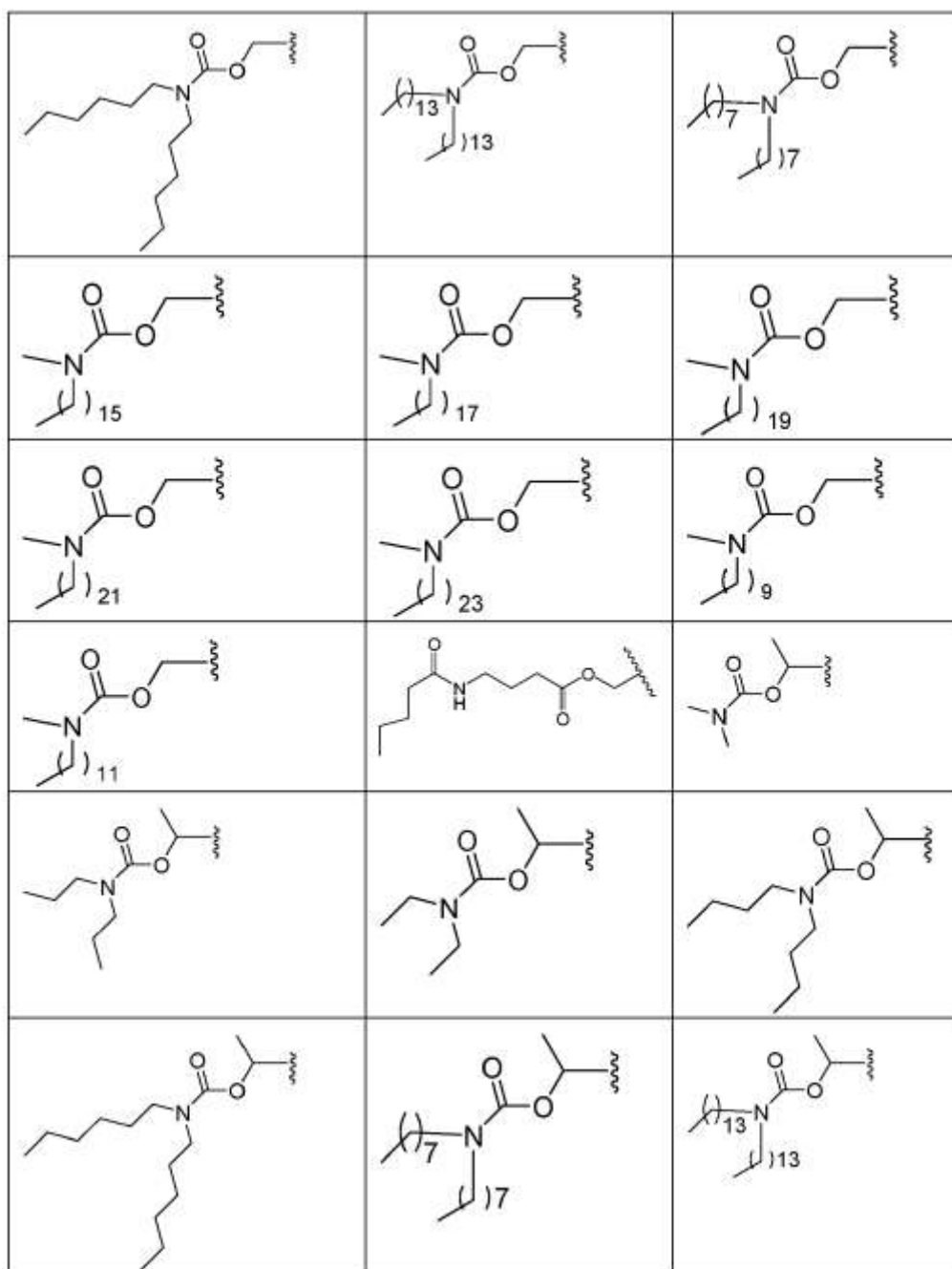


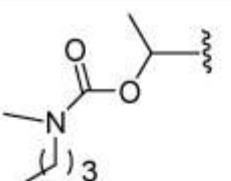
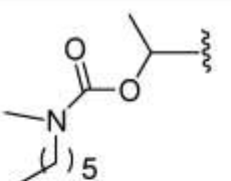
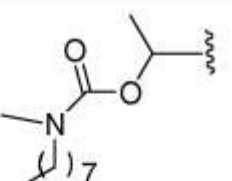
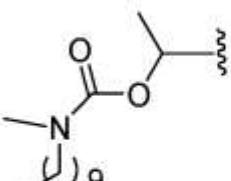
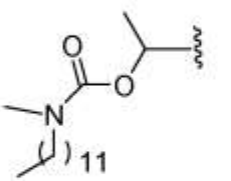
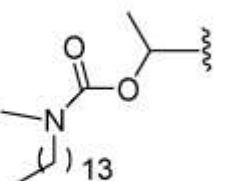
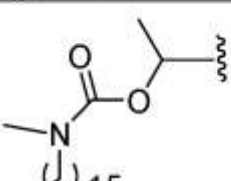
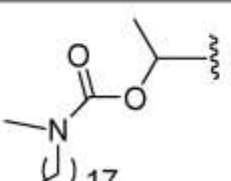
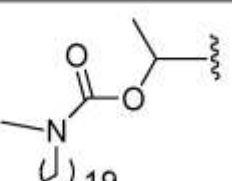
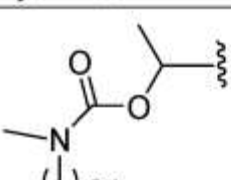
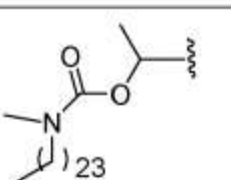
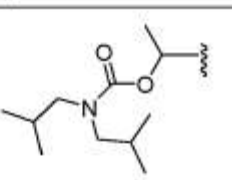
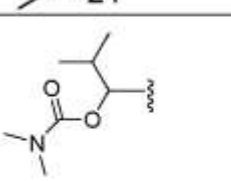
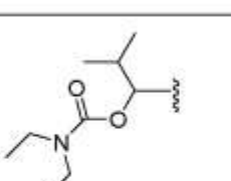
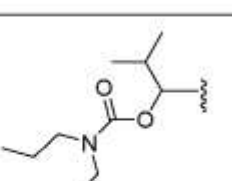
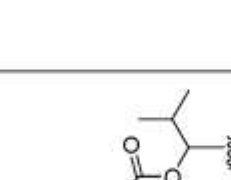
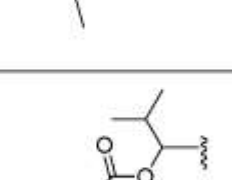


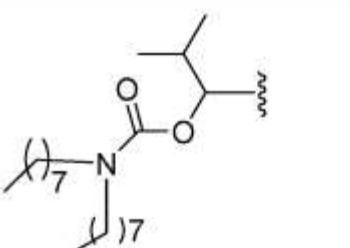
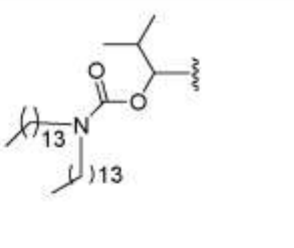
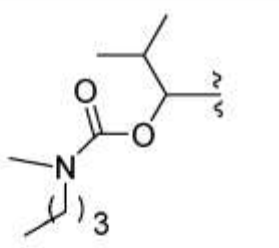
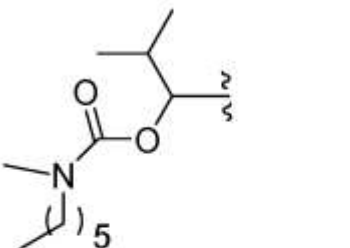
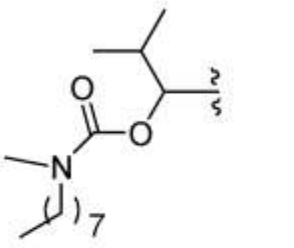
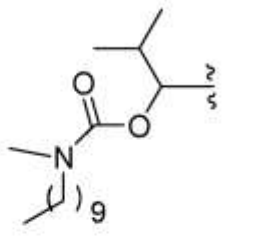
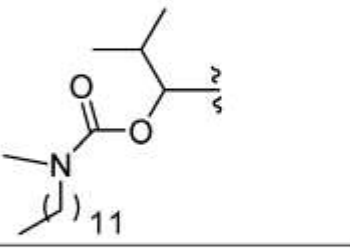
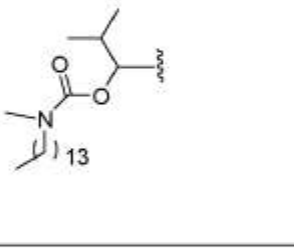
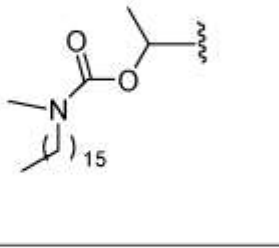
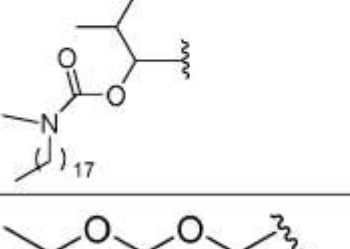
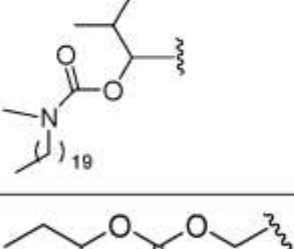
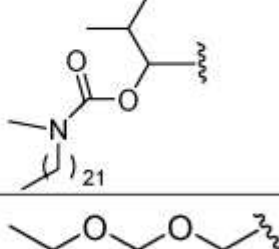
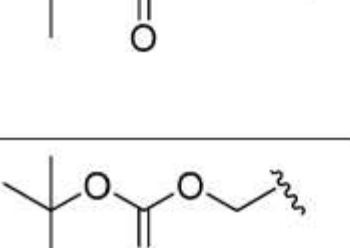
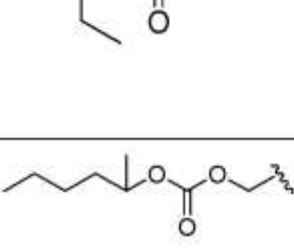
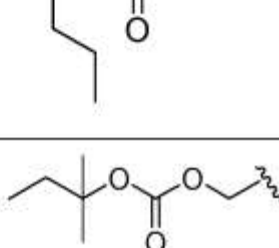
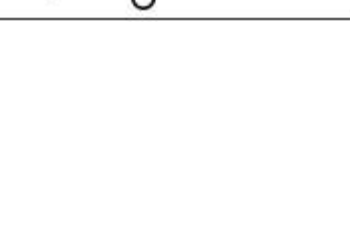


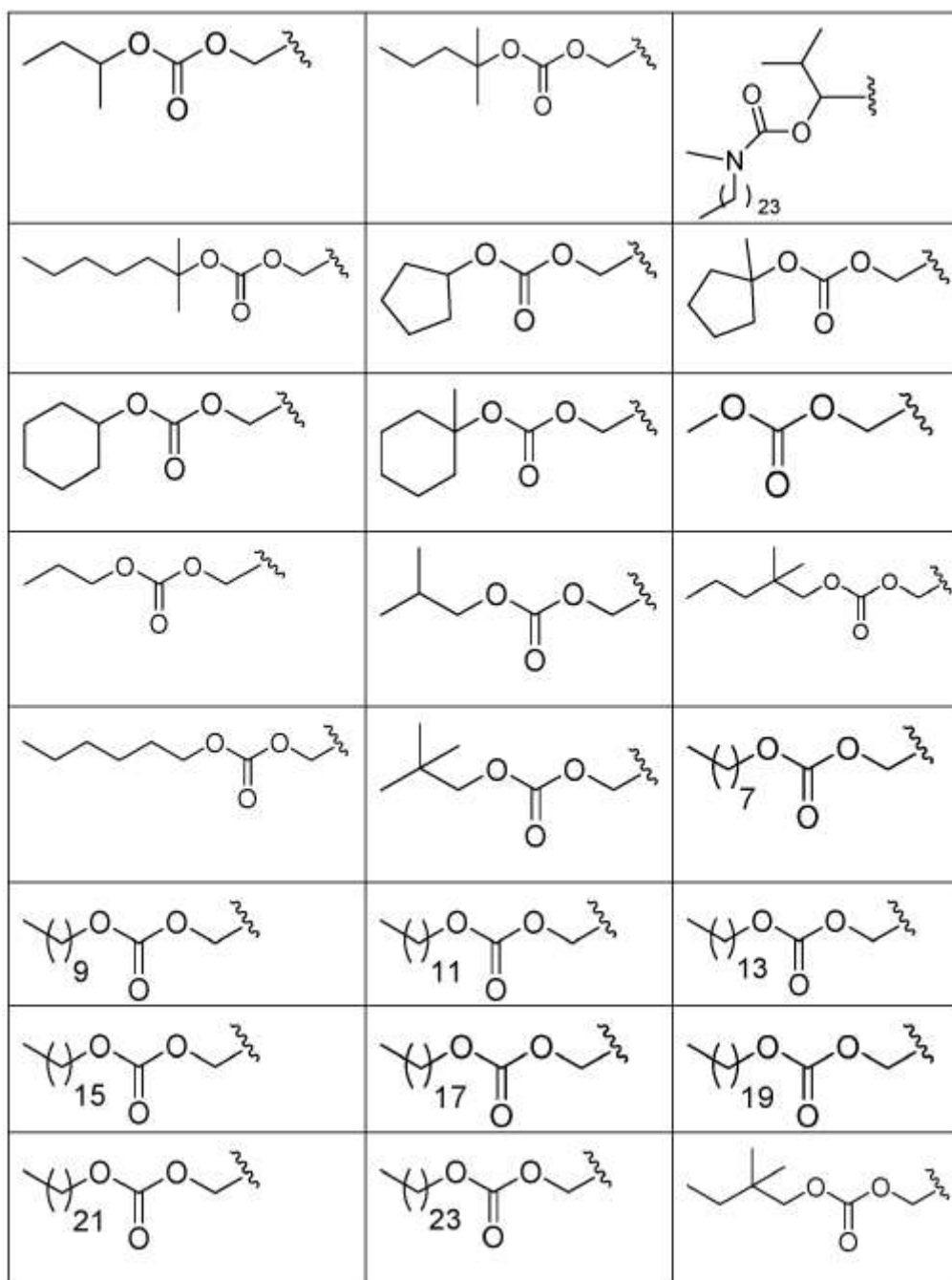


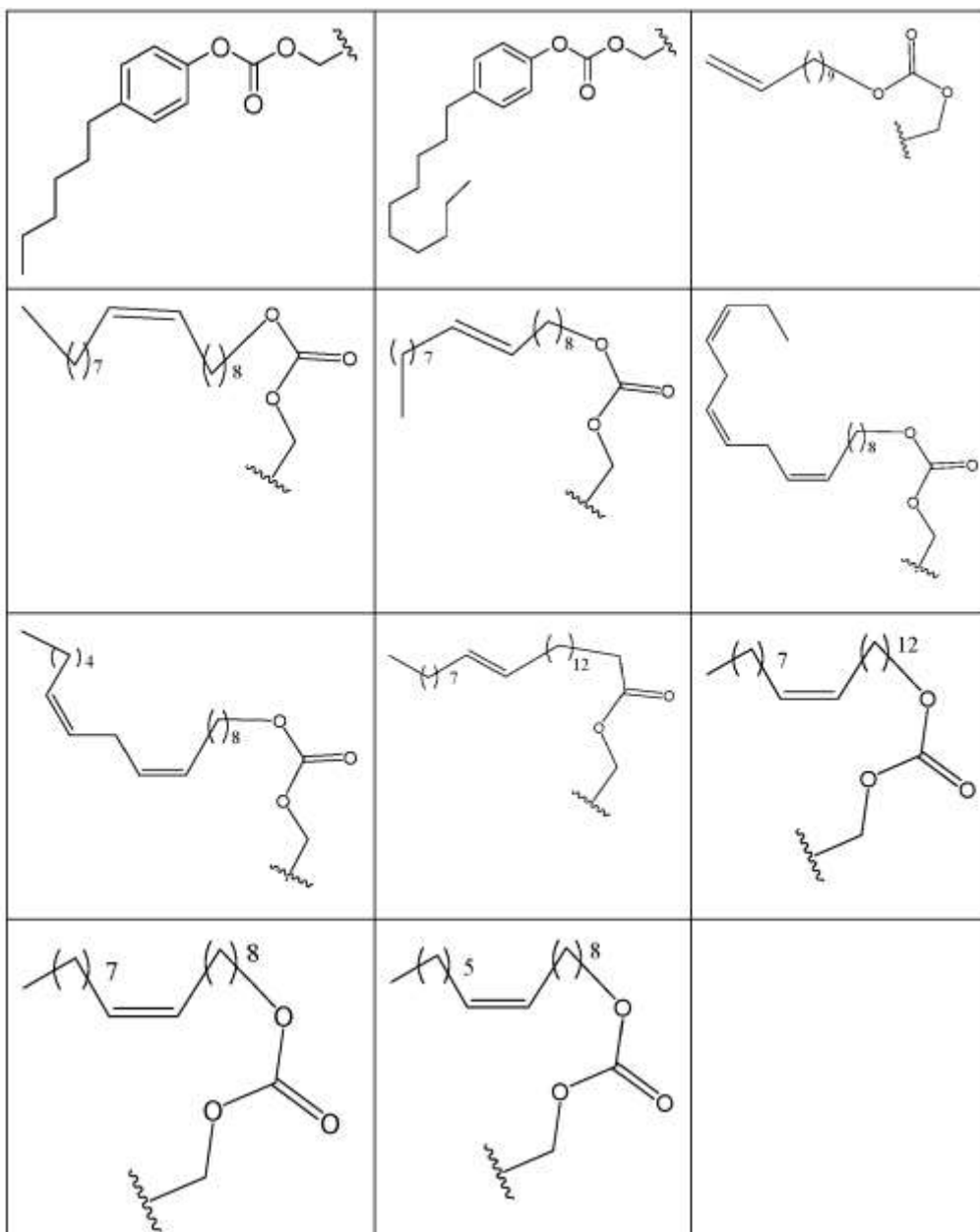


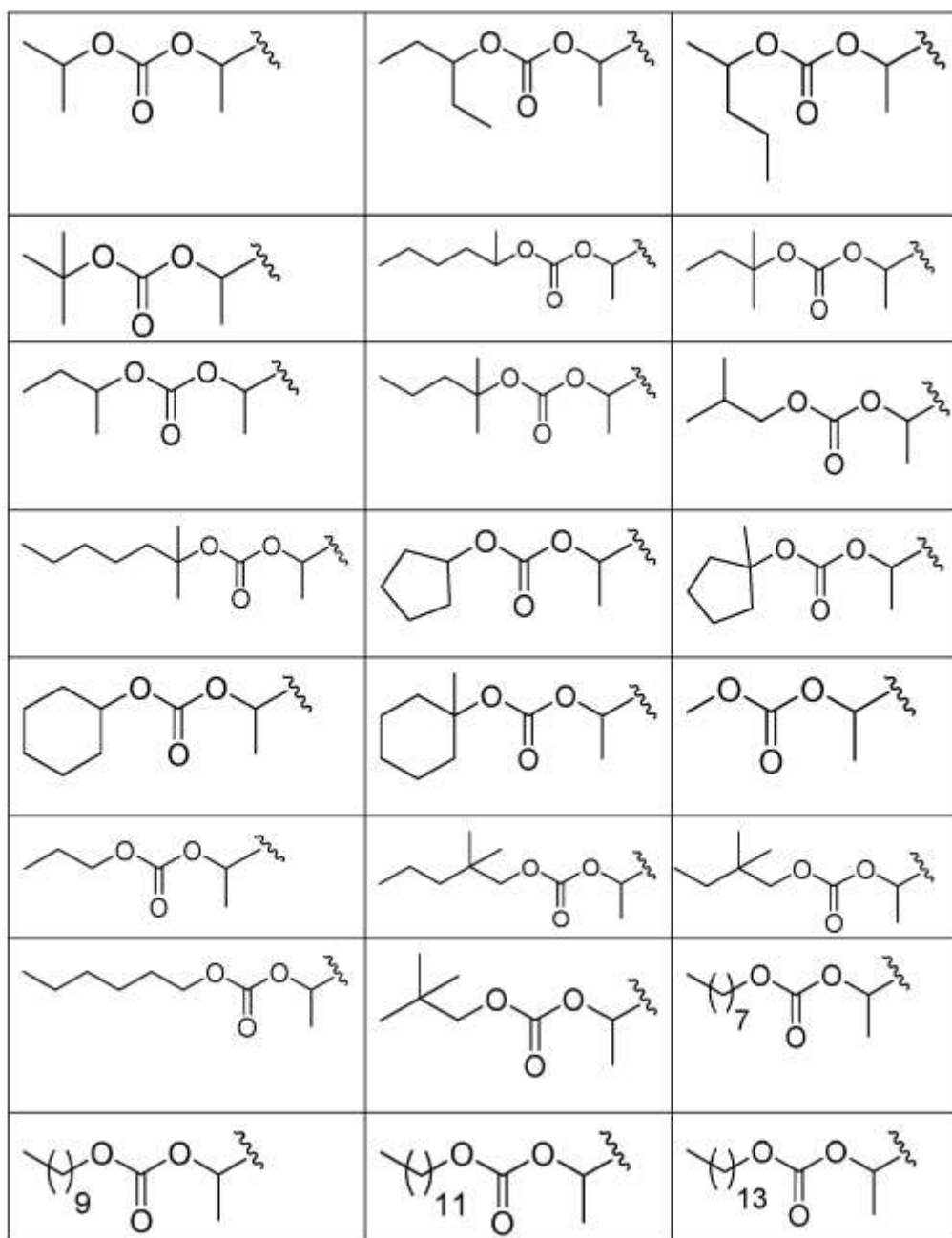


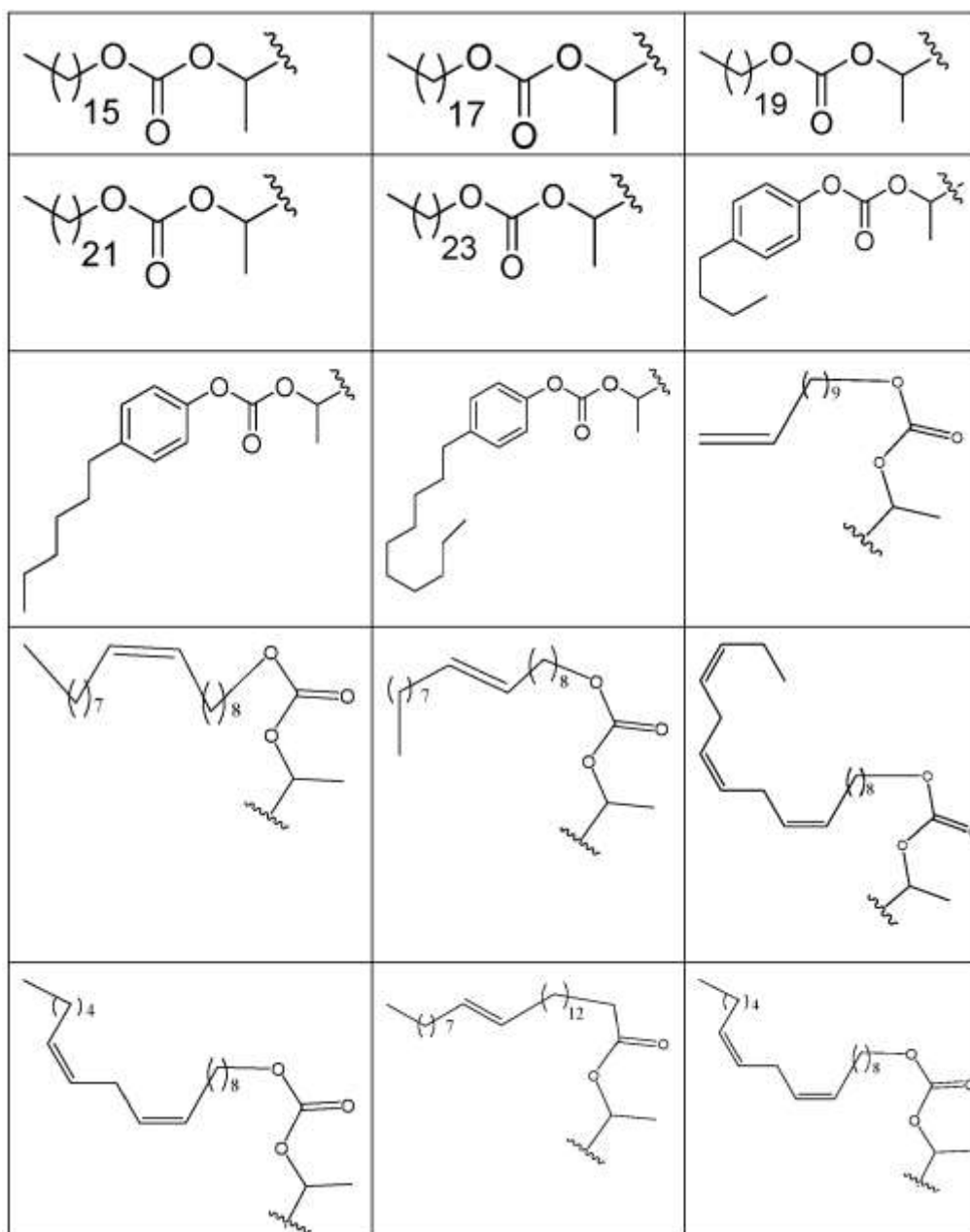
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 <chem>CC(=O)OC(C)C[N+]1(C)CCCCC1</chem>	 <chem>CC(=O)OC(C)C[N+]1(C)CCCCC1</chem>	 <chem>CC(=O)OC(C)C[N+]1(C)CCCCC1</chem>
 <chem>CC(=O)OC(C)C[N+]1(C)CCCCC1</chem>	 <chem>CC(=O)OC(C)C[N+]1(C)CCCCC1</chem>	 <chem>CC(=O)OC(C)C[N+]1(C)CCCCC1</chem>
 <chem>CC(=O)OC(C)C[N+]1(C)CCCCC1</chem>	 <chem>CC(=O)OC(C)C[N+]1(C)CCCCC1</chem>	 <chem>CC(=O)OC(C)C[N+]1(C)CCCCC1</chem>
 <chem>CC(=O)OC(C)C[N+]1(C)CCCCC1</chem>	 <chem>CC(=O)OC(C)C[N+]1(C)CCCCC1</chem>	 <chem>CC(=O)OC(C)C[N+]1(C)CCCCC1</chem>
 <chem>CC(=O)OC(C)C[N+]1(C)CCCCC1</chem>	 <chem>CC(=O)OC(C)C[N+]1(C)CCCCC1</chem>	 <chem>CC(=O)OC(C)C[N+]1(C)CCCCC1</chem>

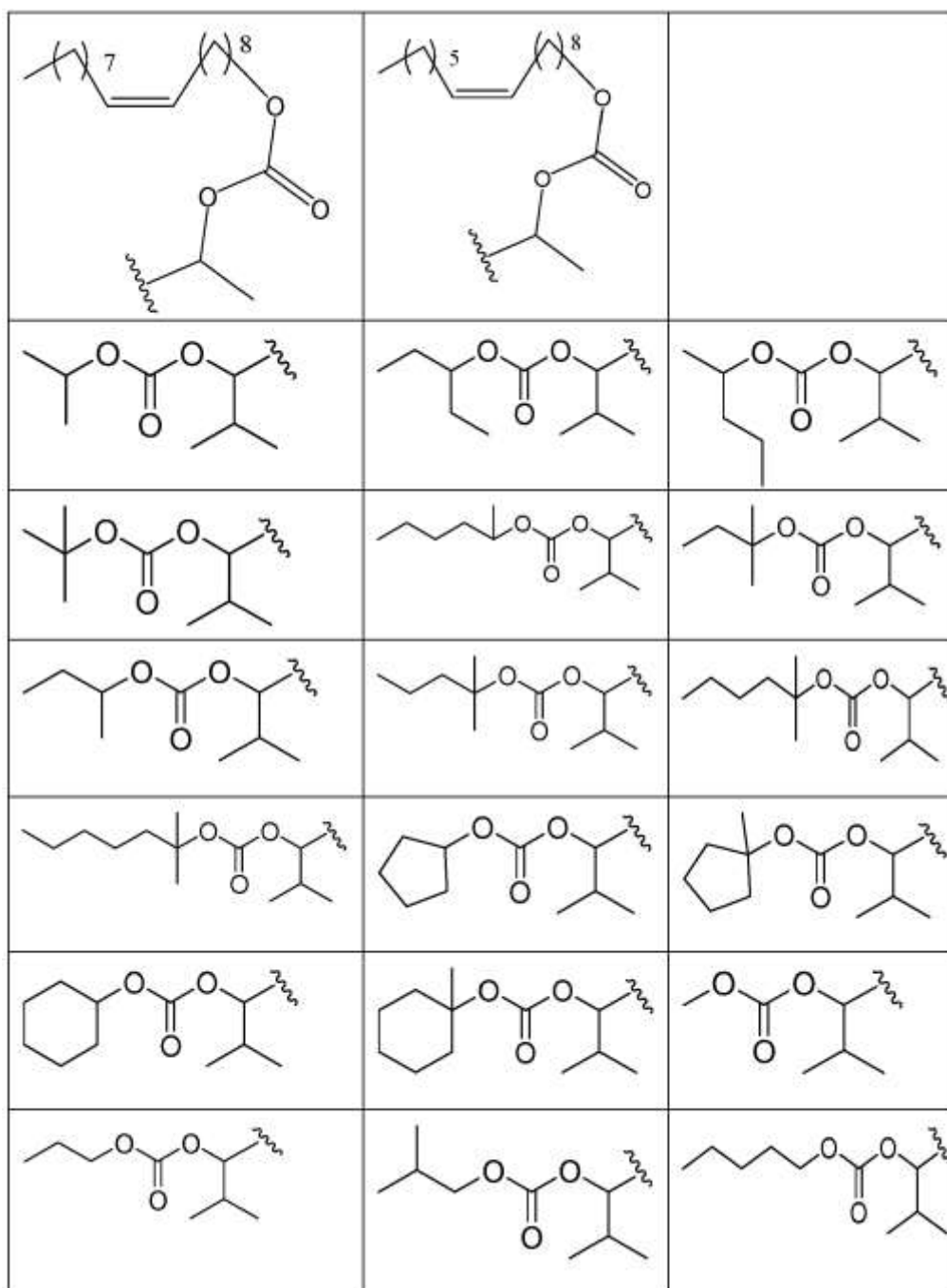
		
		
		
		
		
		

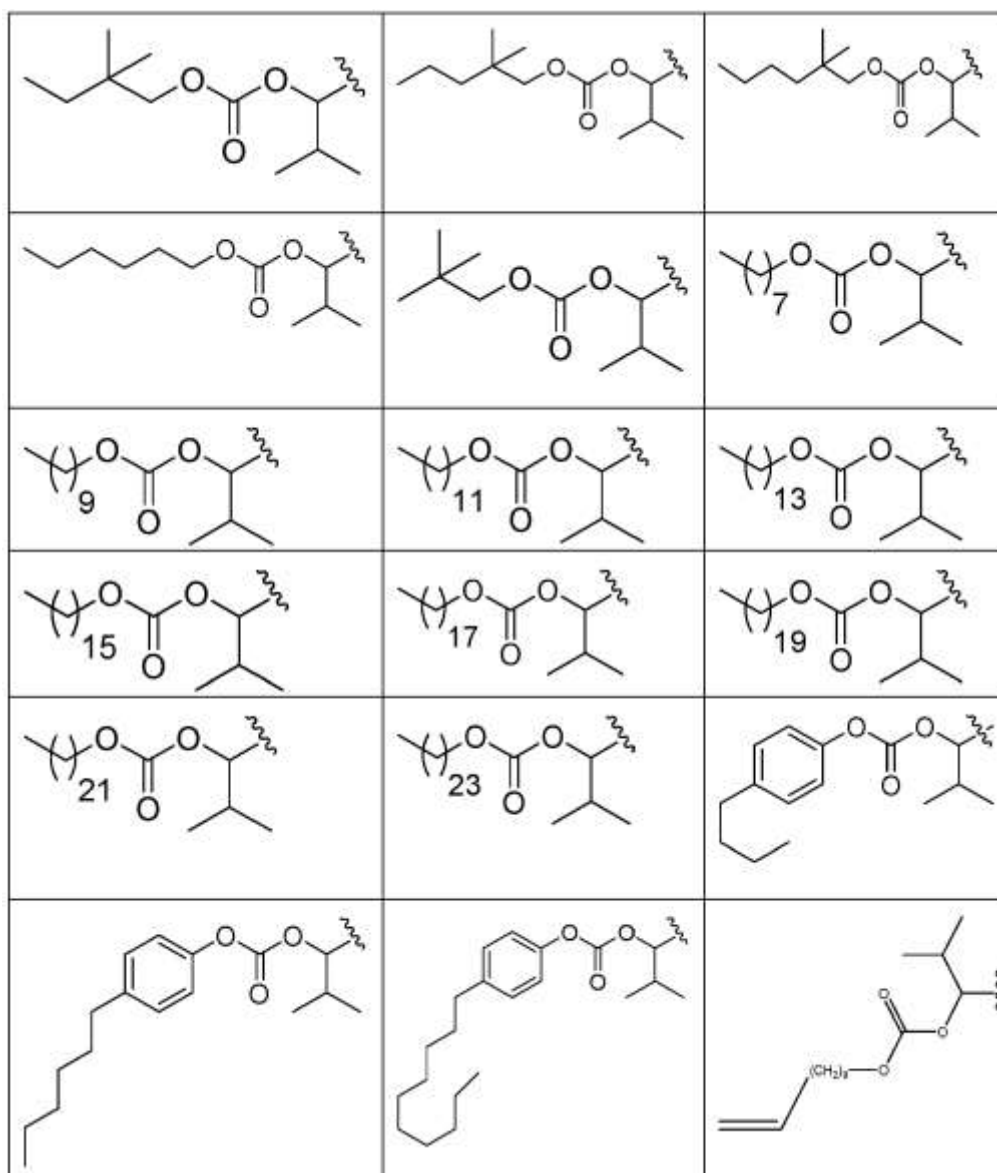


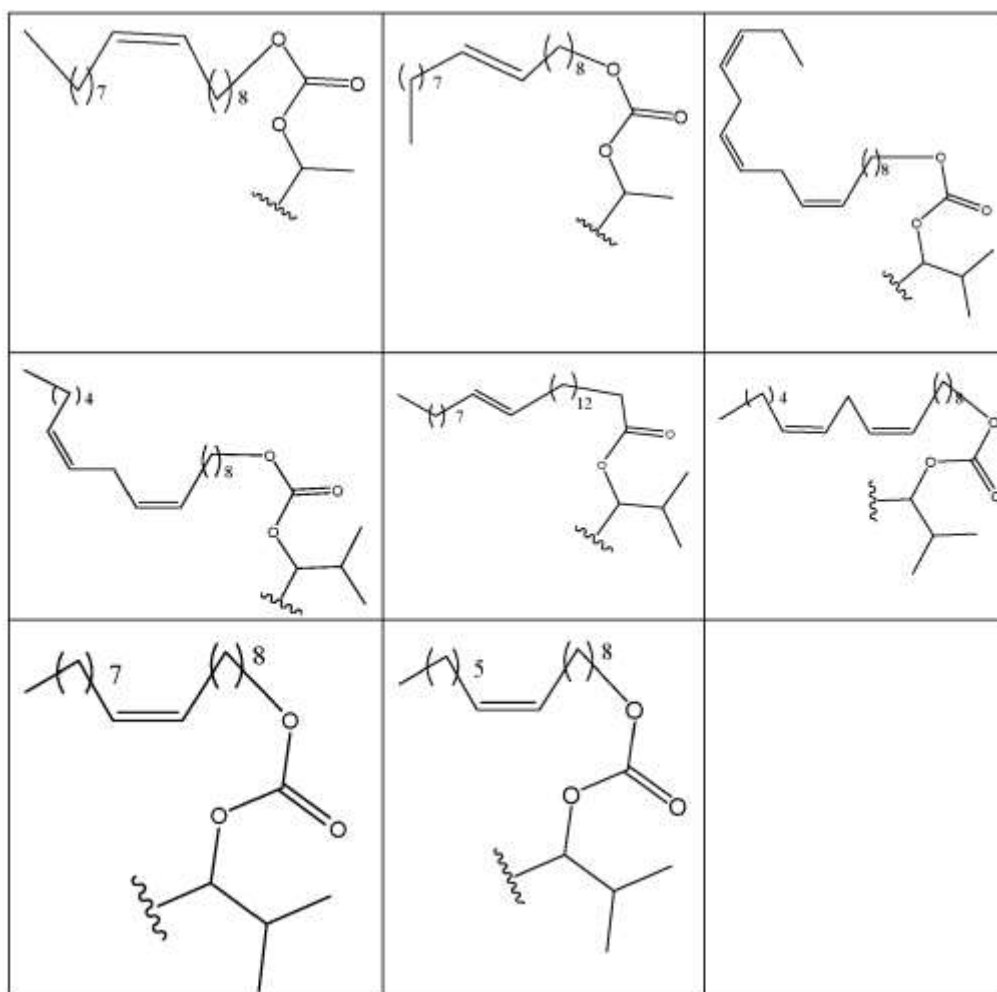










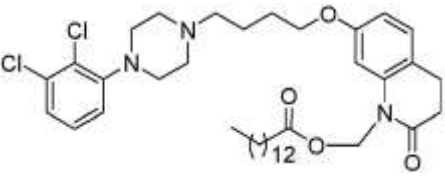
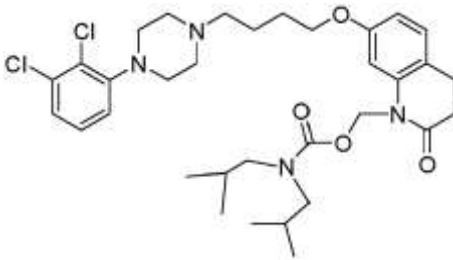
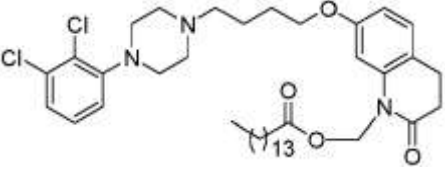
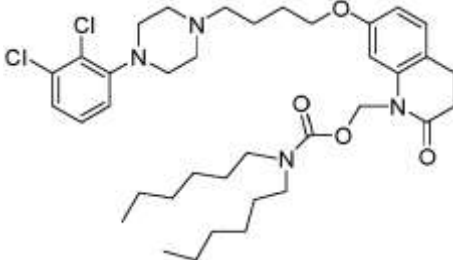
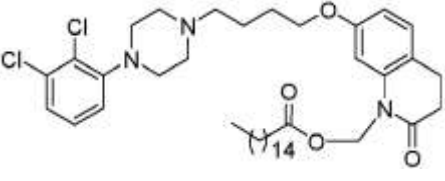
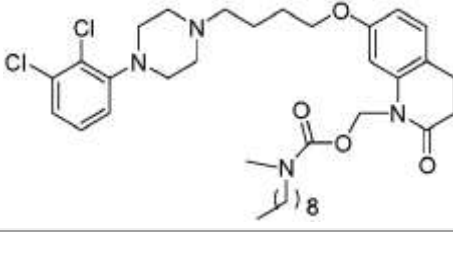
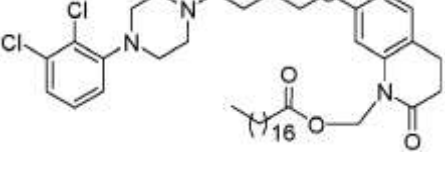
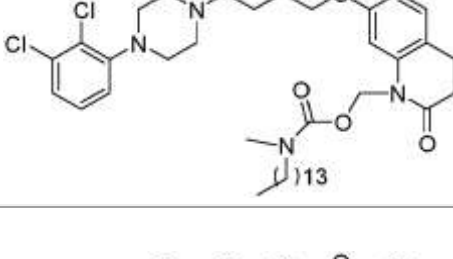
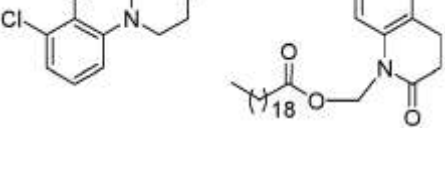
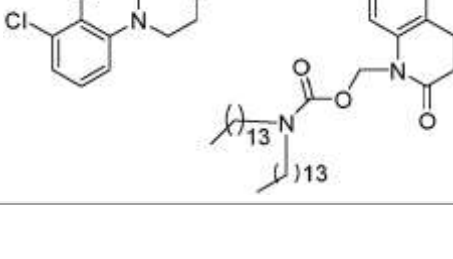


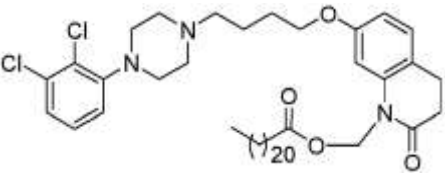
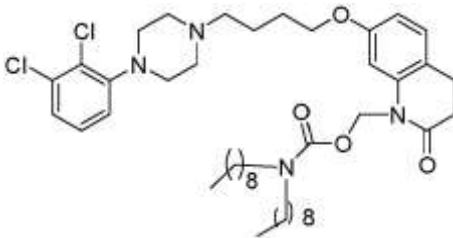
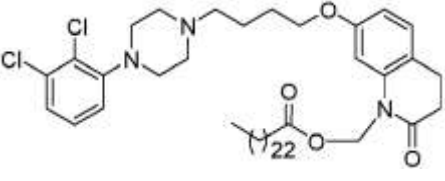
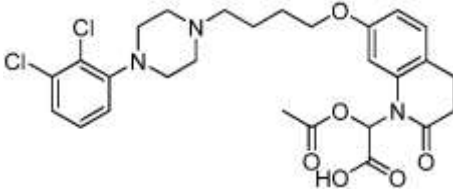
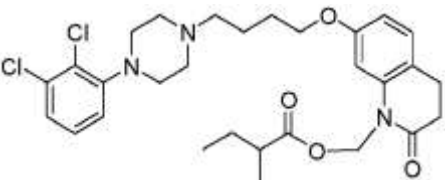
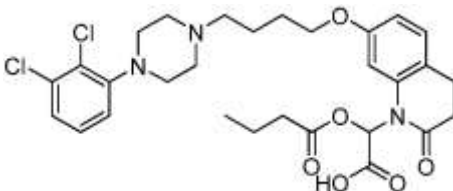
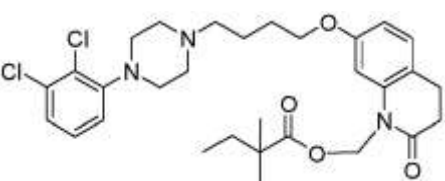
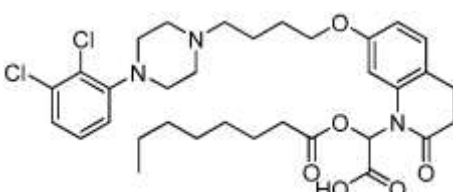
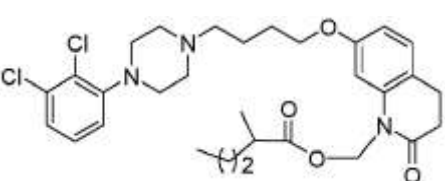
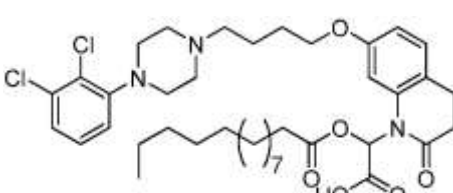
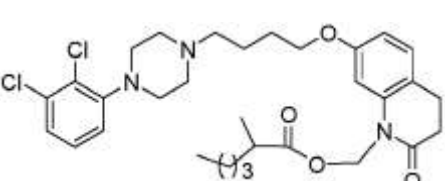
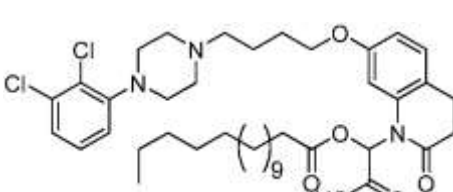
7. En forbindelse ifølge krav 1 valgt fra tabell A eller B og de geometriske isomerer, enantiomerer, diastereomerer, racemater, farmasøytisk akseptable salter og solvater derav:

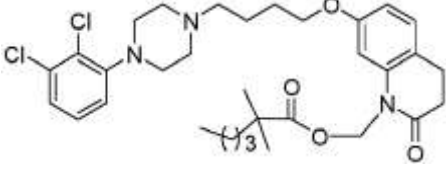
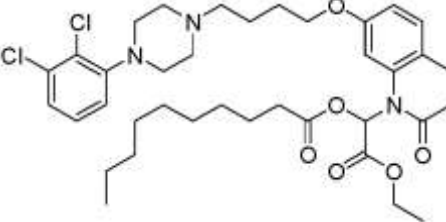
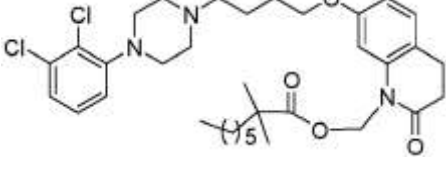
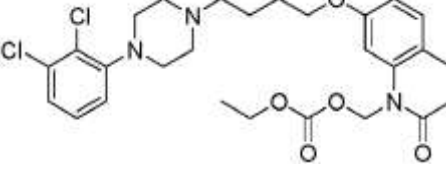
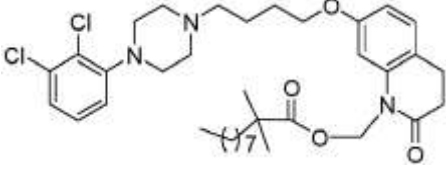
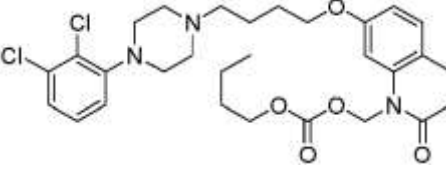
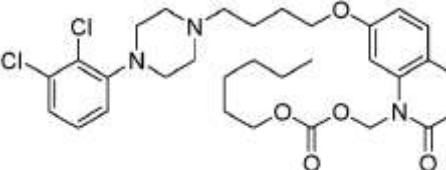
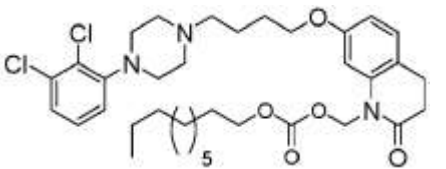
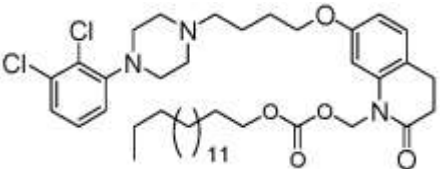
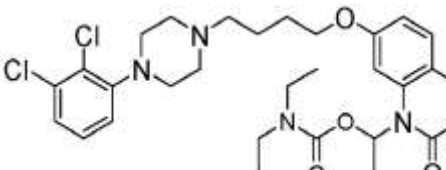
Tabell A

Nr	Struktur	Nr	Struktur
1		60	

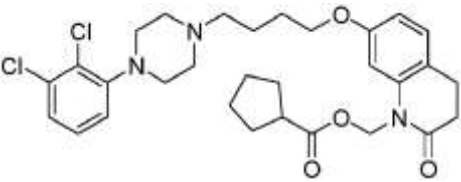
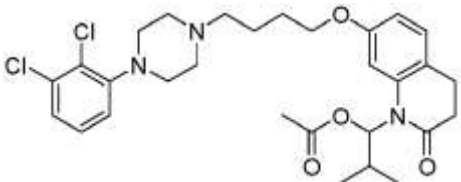
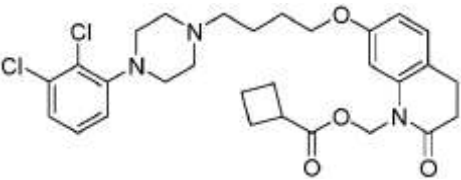
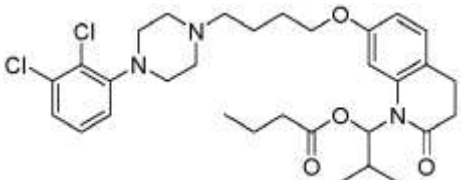
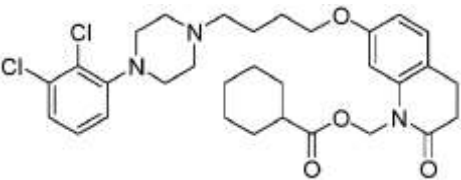
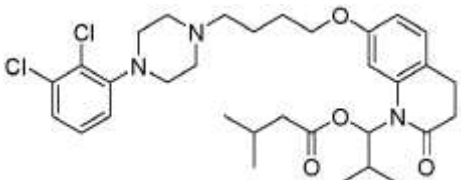
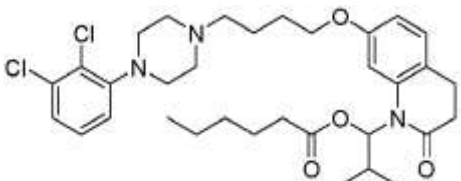
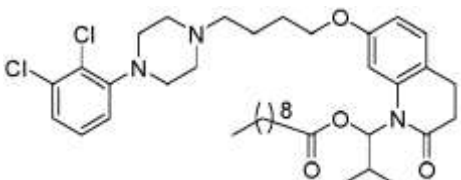
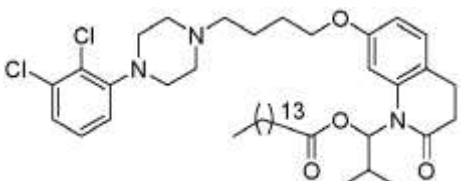
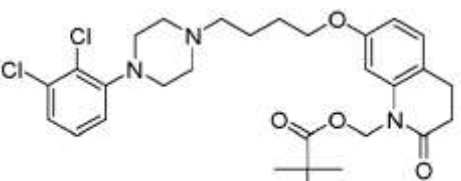
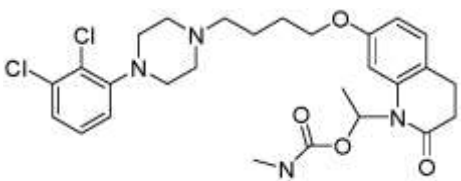
Nr	Struktur	Nr	Struktur
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3		62	
4		63	
5		64	
6		65	
7		66	

Nr	Struktur	Nr	Struktur
8		67	
9		68	
10		69	
11		70	
12		71	

Nr	Struktur	Nr	Struktur
13		72	
14		73	
15		74	
16		75	
17		76	
18		77	

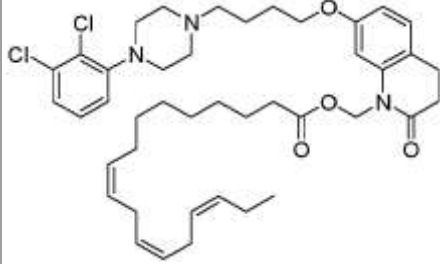
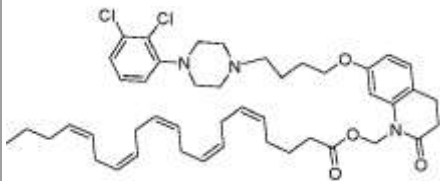
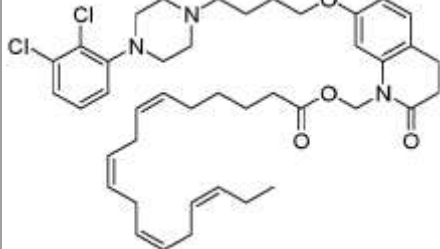
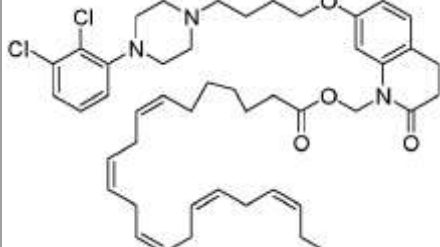
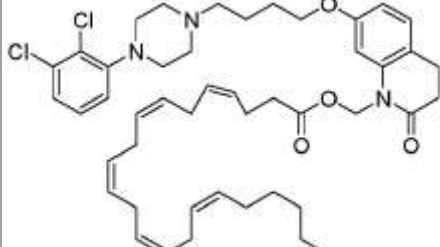
Nr	Struktur	Nr	Struktur
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20		79	
21		80	
		81	
		82	
		83	
		84	

Nr	Struktur	Nr	Struktur
		85	
		86	
		87	
29		88	
30		89	
31		90	
32		91	

Nr	Struktur	Nr	Struktur
33		92	
34		93	
35		94	
		95	
		96	
		97	
42		101	

Nr	Struktur	Nr	Struktur
		102	
		103	
45		104	
46		105	
47		106	
48		107	

Nr	Struktur	Nr	Struktur
		108	
50		109	
51		110	
		111	
		112	

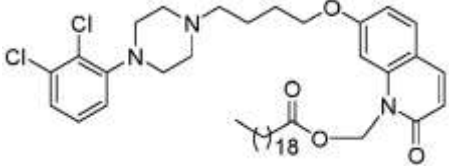
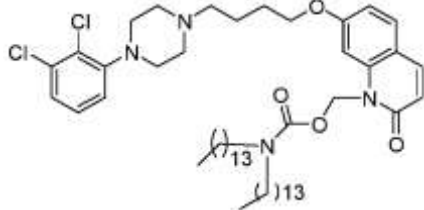
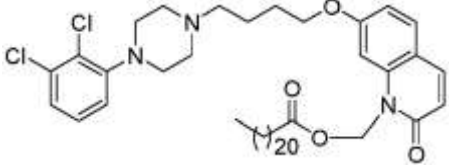
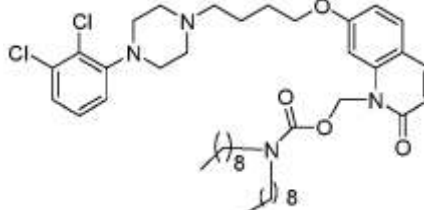
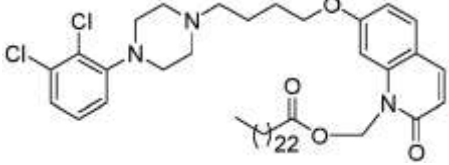
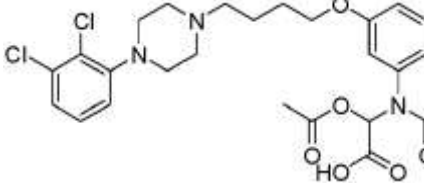
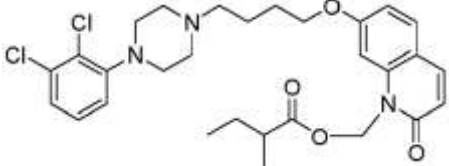
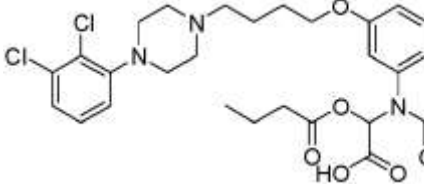
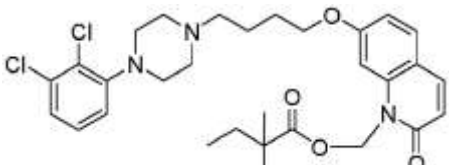
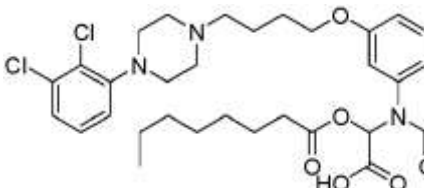
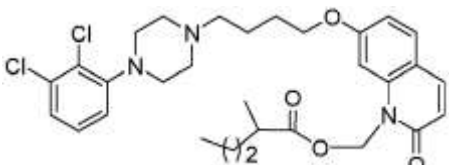
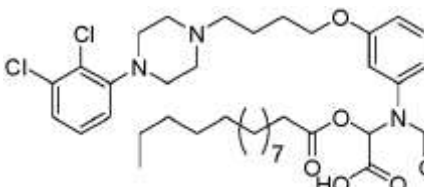
Nr	Struktur	Nr	Struktur
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		115	
		116	
		117	

Nr	Struktur	Nr	Struktur
		118	

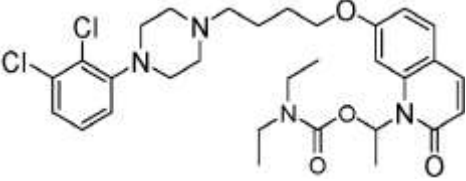
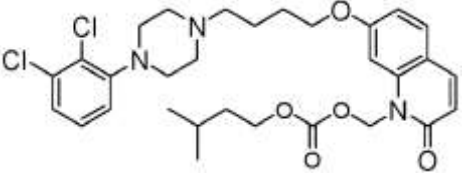
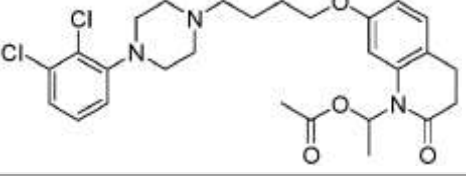
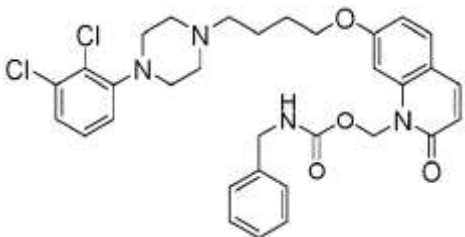
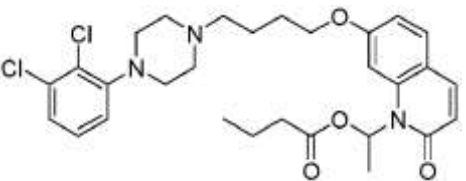
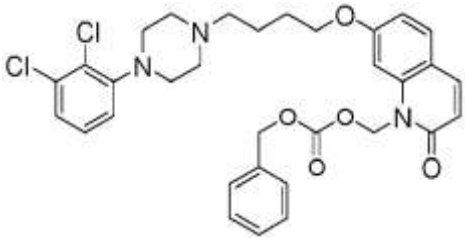
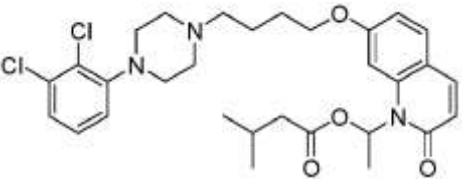
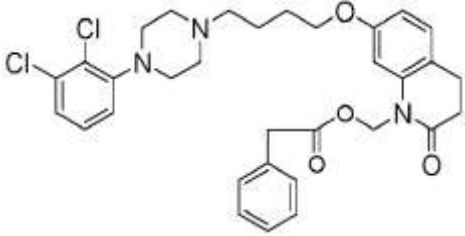
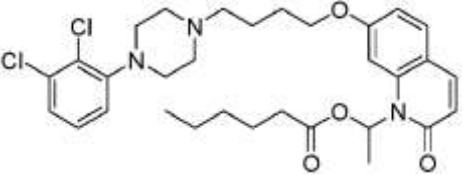
Tabell B

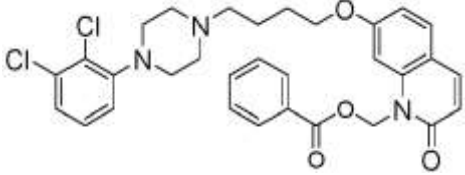
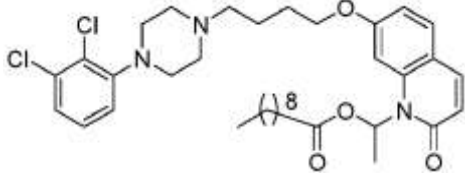
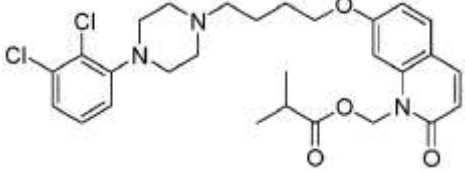
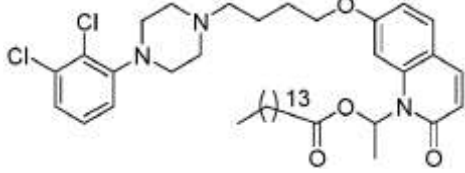
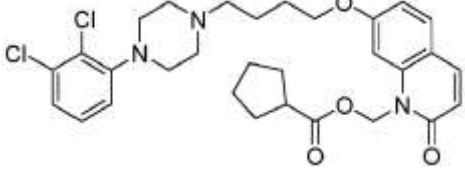
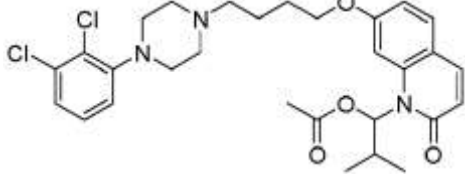
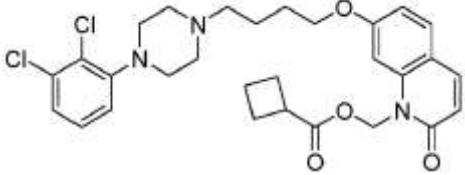
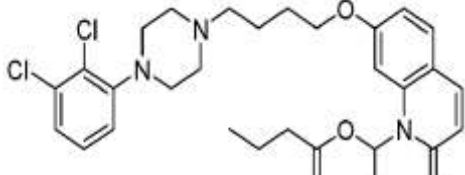
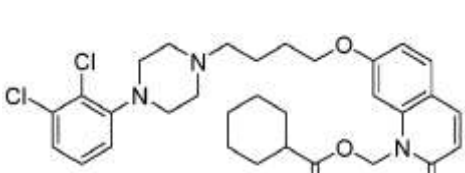
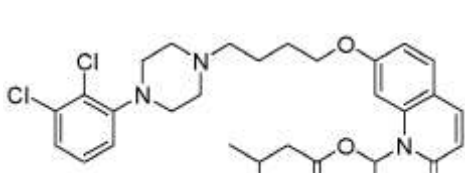
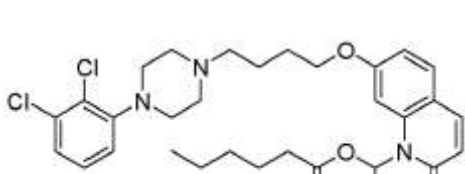
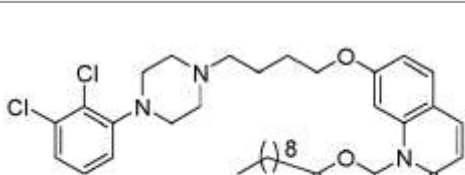
Nr	Struktur	Nr	Struktur
150		209	
151		210	
152		211	
153		212	
154		213	

Nr	Struktur	Nr	Struktur
155		214	
156		215	
157		216	
158		217	
159		218	
160		219	

Nr	Struktur	Nr	Struktur
161		220	
162		221	
163		222	
164		223	
165		224	
166		225	

Nr	Struktur	Nr	Struktur
167		226	
168		227	
169		228	
170		229	
		230	
		231	
		232	

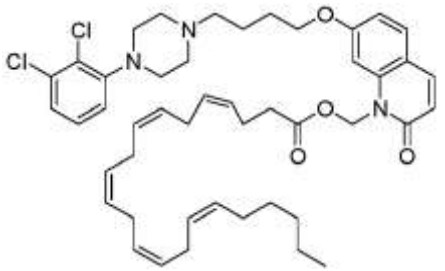
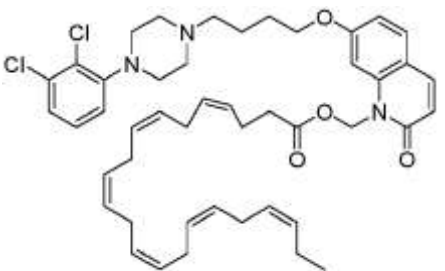
Nr	Struktur	Nr	Struktur
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		234	
		235	
177		236	
178		237	
179		238	

Nr	Struktur	Nr	Struktur
180		239	
181		240	
182		241	
183		242	
184		243	
		244	
		245	

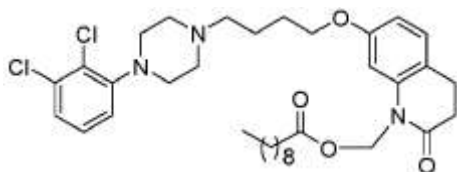
Nr	Struktur	Nr	Struktur
		246	
191		250	
		251	
		252	
194		253	
195		254	

Nr	Struktur	Nr	Struktur
196		255	
197		256	
198		257	
199		258	
200		259	
201		260	

Nr	Struktur	Nr	Struktur
		261	
		262	
		263	
		264	
		265	

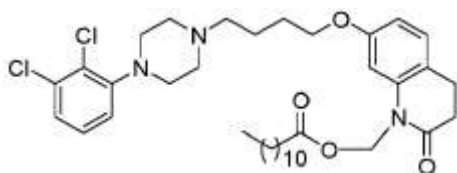
Nr	Struktur	Nr	Struktur
		266	
		267	

8. En forbindelse ifølge krav 1, med formel:



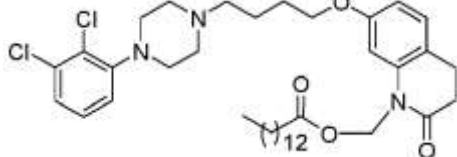
eller et farmasøytisk akseptabelt salt derav.

9. En forbindelse ifølge krav 1, med formel:



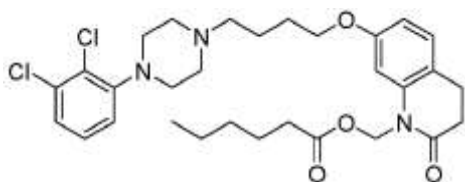
eller et farmasøytisk akseptabelt salt derav.

10. En forbindelse ifølge krav 1,



eller et farmasøytisk akseptabelt salt derav.

11. En forbindelse ifølge krav 1, med formel:

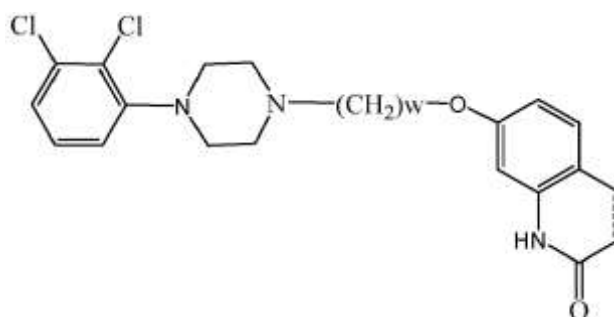


eller et farmasøytisk akseptabelt salt derav.

12. En forbindelse ifølge hvilket som helst av kravene krav 1-11 for anvendelse i behandling av en nevrologisk eller psykisk lidelse.

13. En forbindelse til anvendelse ifølge krav 12, hvor nevnte sykdom er schizofreni.

14. En forbindelse ifølge hvilket som helst av kravene 1-11 for anvendelse i en fremgangsmåte for vedvarende tilførsel av en forbindelse med formel XXIII-V:



Formel XXIII-V

hvor w er som definert i krav 1; hvor, ved administrering til pasienten, frigjøring av forbindelsen med formel XXIII-V er vedvarende frigivelse.

15. Forbindelse ifølge krav 14, hvor vedvarende frigivelse omfatter en terapeutisk effektiv mengde av forbindelsen med formel XXIII-V i blodstrømmen til pasienten i en periode på minst ca. 36 timer etter administrering av forbindelsen ifølge et hvilket som helst av kravene 1 til 11.

16. Forbindelse ifølge krav 14, hvor nevnte forbindelse med formel XXIII-V er til stede i blodstrømmen til pasienten i en periode valgt fra: minst 7, 15, 30, 60, 75 eller 90 dager.

17. Forbindelse til anvendelse ifølge krav 16, hvor forbindelsen administreres ved injeksjon.

18. En farmasøytisk sammensetning omfattende en terapeutisk effektiv mengde av en forbindelse ifølge et hvilket som helst av kravene 1-11, og en eller flere farmasøytisk akseptable bærere eller eksipienser.