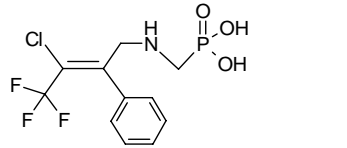
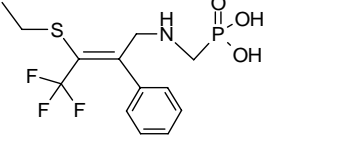
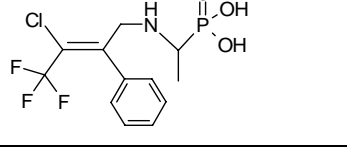
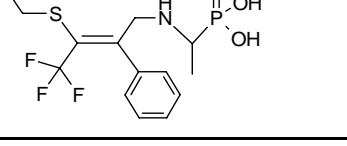
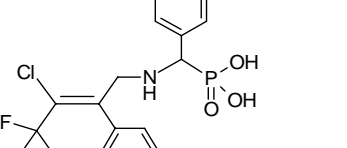
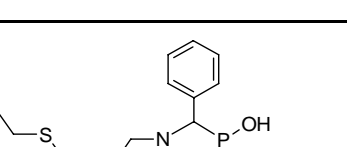
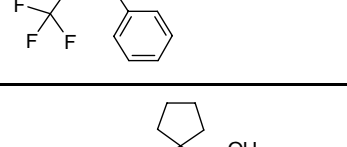
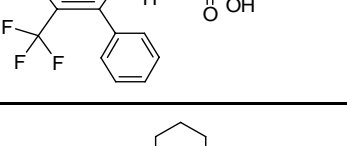
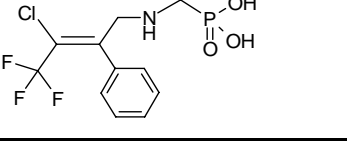
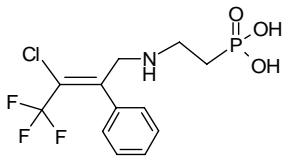
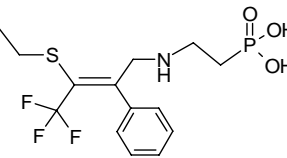
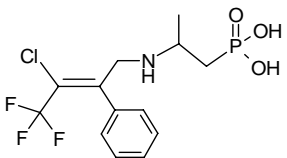
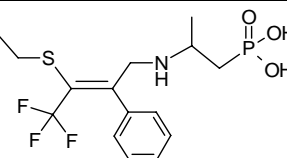
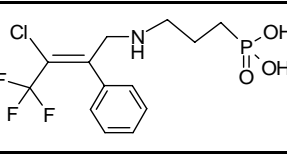
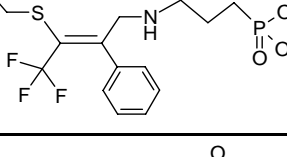
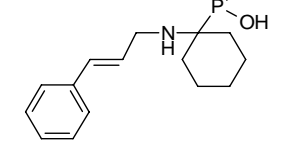
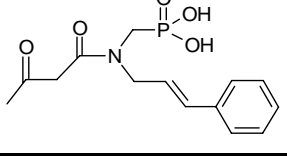
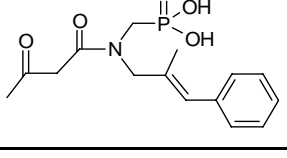
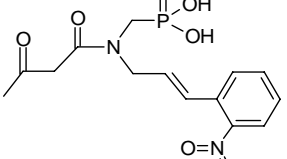
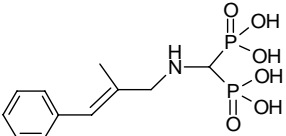
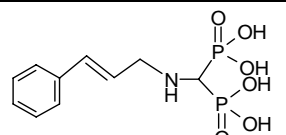
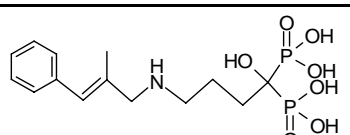
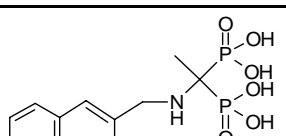
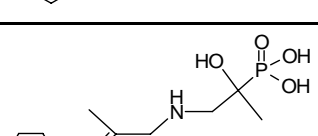
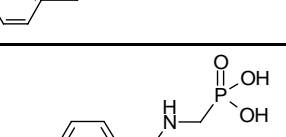
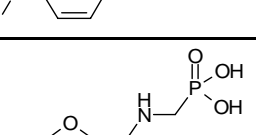
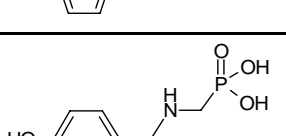
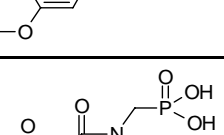
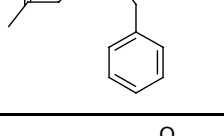
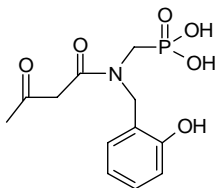
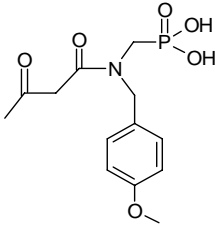
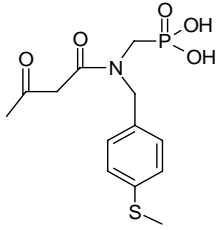
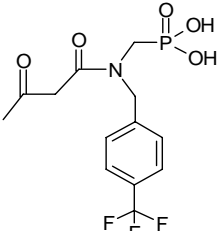
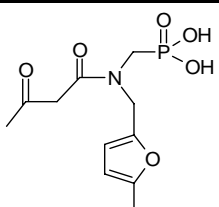
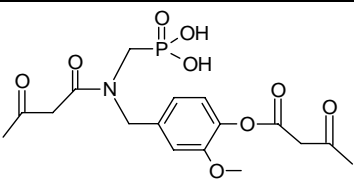
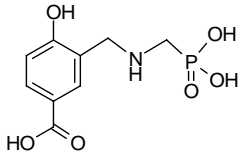
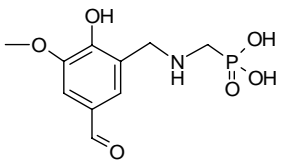
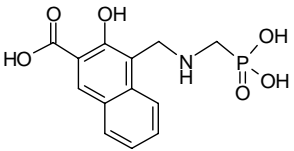
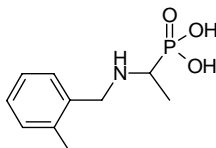
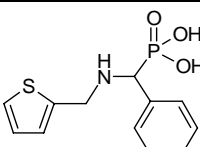
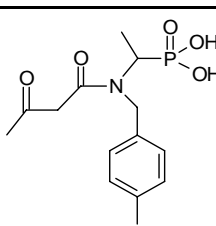
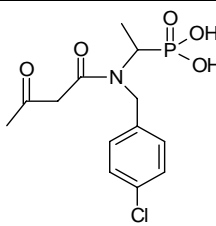
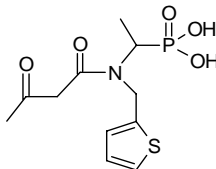
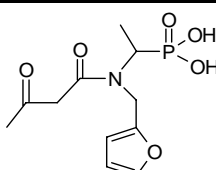
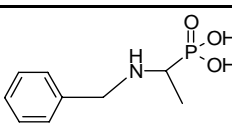
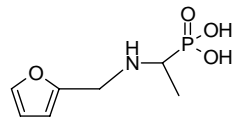
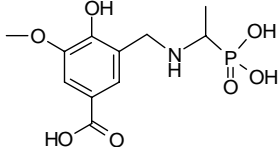


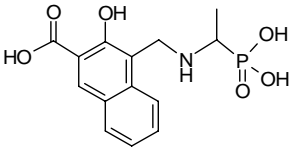
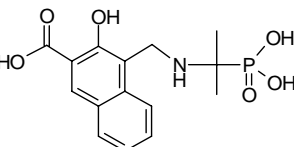
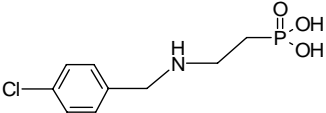
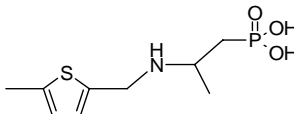
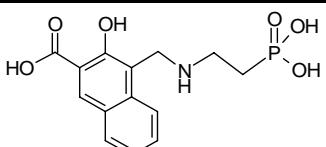
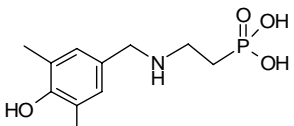
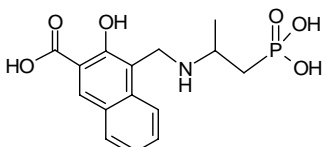
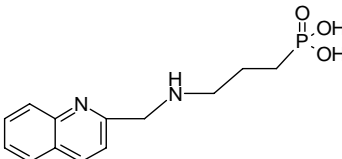
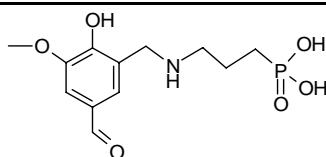
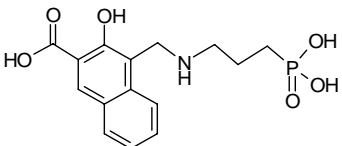
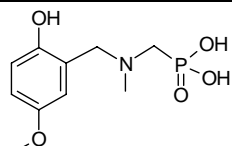
ID Number	Structure	Formula	M.W.	m.p. (°C)	Remarks
E					
N-ALLYL and N-BENZYL type AMINO-(CARBOXY)-(DI)PHOSPHONIC ACIDS					
E01-10-3229		C ₁₁ H ₁₂ ClF ₃ NO ₃ P	329,65	97-102	2 isomers white solid
E01-10-3230		C ₁₃ H ₁₇ F ₃ NO ₃ PS	355,32	193-196	2 isomers white solid
E01-10-3231		C ₁₂ H ₁₄ ClF ₃ NO ₃ P	343,67	212-213	2 isomers white solid
E01-10-3232		C ₁₄ H ₁₉ F ₃ NO ₃ PS	369,35	133-137	2 isomers white solid
E01-10-3233		C ₁₇ H ₁₆ ClF ₃ NO ₃ P	405,74	194-196	2 isomers white solid
E01-10-3234		C ₁₉ H ₂₁ F ₃ NO ₃ PS	431,42	213-214	2 isomers white solid
E01-10-3235		C ₁₅ H ₁₈ ClF ₃ NO ₃ P	383,74	199-200	2 isomers white solid
E01-10-3236		C ₁₆ H ₂₀ ClF ₃ NO ₃ P	397,76	173-174	2 isomers white solid
E01-10-3237		C ₁₈ H ₂₅ F ₃ NO ₃ PS	423,44	194-195	2 isomers white solid

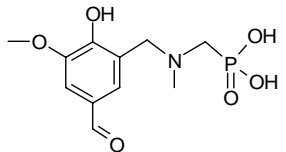
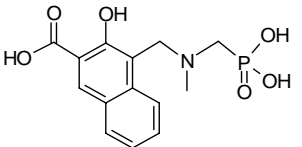
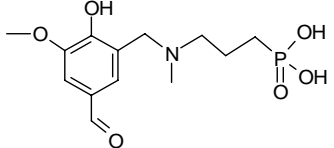
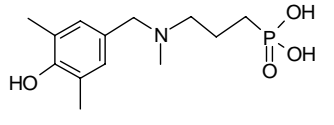
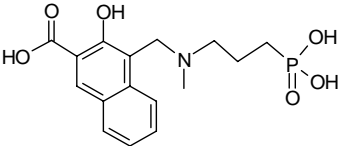
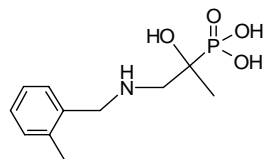
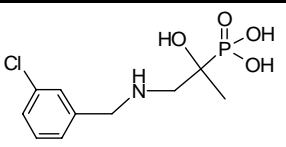
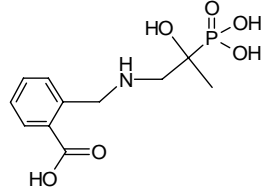
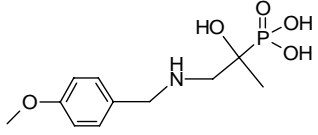
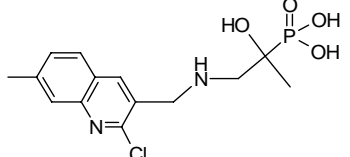
E01-10-3238		C ₁₂ H ₁₄ ClF ₃ NO ₃ P	343,67	205-207	2 isomers colorless crystals
E01-10-3239		C ₁₄ H ₁₉ F ₃ NO ₃ PS	369,35	172-174	2 isomers white solid
E01-10-3240		C ₁₃ H ₁₆ ClF ₃ NO ₃ P	357,70	91-95	2 isomers white solid
E01-10-3241		C ₁₅ H ₂₁ F ₃ NO ₃ PS	383,37	88-93	2 isomers white solid
E01-10-3242		C ₁₃ H ₁₆ ClF ₃ NO ₃ P	357,70	168-171	2 isomers white solid
E01-10-3243		C ₁₅ H ₂₁ F ₃ NO ₃ PS	383,37	185-187	2 isomers white solid
E02-15-3297		C ₁₅ H ₂₂ NO ₃ P	295,32	219-220	colorless crystals
E02-15-3302		C ₁₄ H ₁₈ NO ₅ P	311,28	142-147	colorless crystals
E02-15-3303		C ₁₅ H ₂₀ NO ₅ P	325,30	146-150	colorless crystals
E02-15-3304		C ₁₄ H ₁₇ N ₂ O ₇ P	356,27	160-162	pale yellow crystals

E02-48-4125		C ₁₁ H ₁₇ NO ₆ P ₂	321,21	245-249	colorless crystals
E02-48-4253		C ₁₀ H ₁₅ NO ₆ P ₂	307,18	170-176	cream-colored crystals
E02-48-4271		C ₁₄ H ₂₃ NO ₇ P ₂	379,29	152-157	colorless crystals
E02-48-4411		C ₁₂ H ₁₉ NO ₆ P ₂	335,24	210-213	colorless crystals
E02-48-4516		C ₁₃ H ₂₀ NO ₄ P	285,28	245-247	colorless crystals
E03-15-3292		C ₉ H ₁₄ NO ₄ P	231,19	268-271	colorless crystals
E03-15-3293		C ₇ H ₁₂ NO ₄ P	205,15	226-228	pale pink crystals
E03-15-3294		C ₉ H ₁₄ NO ₅ P	247,19	128-130	colorless crystals
E03-15-3298		C ₁₂ H ₁₆ NO ₅ P	285,24	145-149	colorless needles
E03-15-3299		C ₁₃ H ₁₈ NO ₅ P	299,27	149-155	colorless crystals

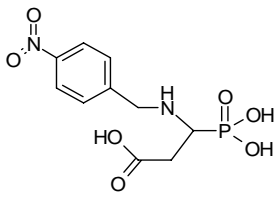
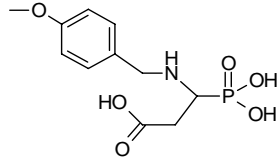
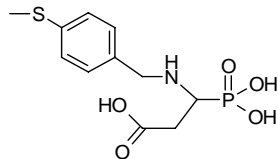
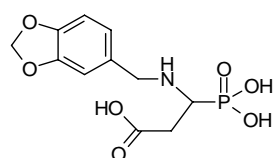
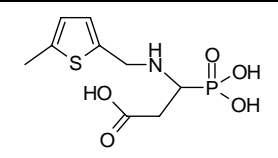
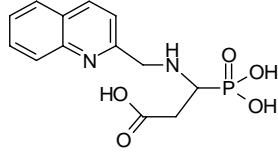
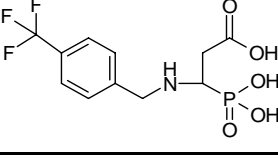
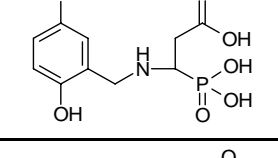
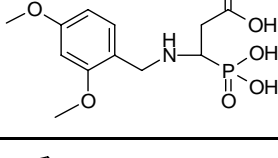
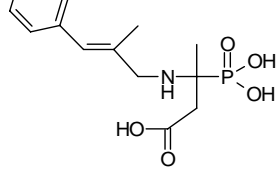
E03-15-3300		C ₁₂ H ₁₆ NO ₆ P	301,24	152-156	pale pink crystals
E03-15-3301		C ₁₃ H ₁₈ NO ₆ P	315,27	133-136	colorless crystals
E03-15-3305		C ₁₃ H ₁₈ NO ₅ PS	331,33	160-163	colorless crystals
E03-15-3306		C ₁₃ H ₁₅ F ₃ NO ₅ P	353,24	145-149	colorless needles
E03-15-3307		C ₁₁ H ₁₆ NO ₆ P	289,23	105-110	colorless crystals
E03-15-3308		C ₁₇ H ₂₂ NO ₉ P	415,34	145-146	colorless crystals
E03-25-3686		C ₉ H ₁₂ NO ₆ P	261,17	338-340	white powder
E03-25-3687		C ₁₀ H ₁₄ NO ₆ P	275,20	over 260	colorless crystals

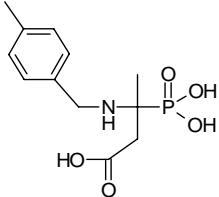
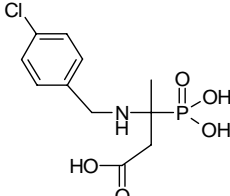
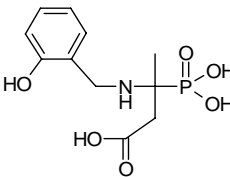
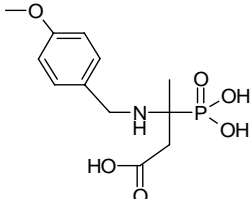
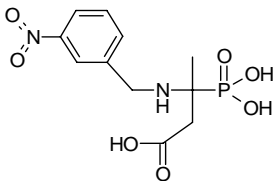
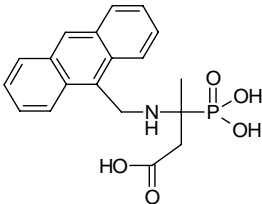
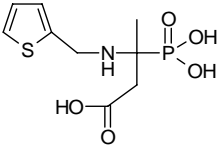
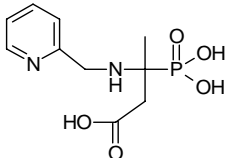
E03-25-3688		C ₁₃ H ₁₄ NO ₆ P	311,23	246-250	yellowish crystals
E04-15-3295		C ₁₀ H ₁₆ NO ₃ P	229,22	246-248	colorless crystals
E04-15-3296		C ₁₂ H ₁₄ NO ₃ PS	283,29	239-241	colorless crystals
E04-15-3309		C ₁₄ H ₂₀ NO ₅ P	313,29	154-156	colorless crystals
E04-15-3310		C ₁₃ H ₁₇ ClNO ₅ P	333,71	172-175	white crystals
E04-15-3311		C ₁₁ H ₁₆ NO ₅ PS	305,29	78-82	yellowish crystals
E04-15-3312		C ₁₁ H ₁₆ NO ₆ P	289,23	139-141	colorless needles
E04-15-4860		C ₉ H ₁₄ NO ₃ P	215,19	246-247	colorless crystals
E04-15-4861		C ₇ H ₁₂ NO ₄ P	205,15	255-257	colorless crystals
E04-25-3691		C ₁₁ H ₁₆ NO ₇ P	305,23	184-189	colorless crystals

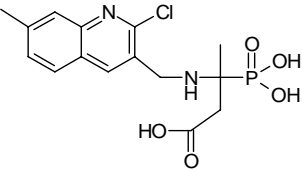
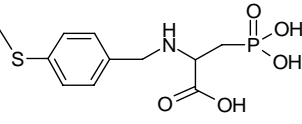
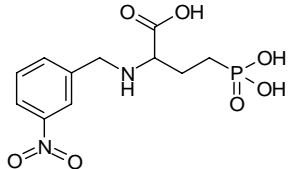
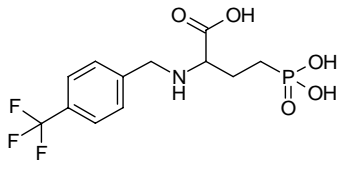
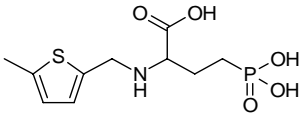
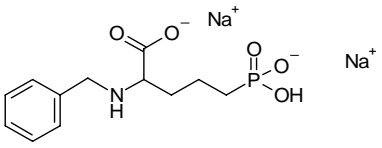
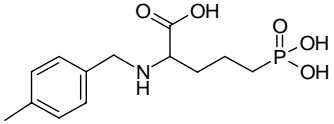
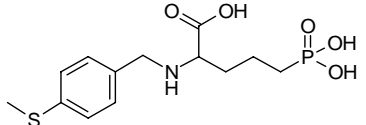
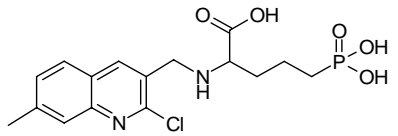
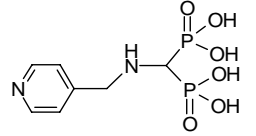
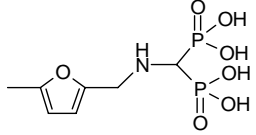
E04-25-3694		C14H16NO6P	325,26	259-263	yellowish crystals
E04-25-3695		C15H18NO6P	339,29	244-248	yellowish crystals
E05-15-4862		C9H13ClNO3P	249,64	135-139	colorless crystals
E05-15-4863		C9H16NO3PS	249,27	141-145	white solid hygroscopic
E05-25-3703		C14H16NO6P	325,26	254-258	yellowish crystals
E05-25-3704		C11H18NO4P	259,24	249-252	colorless crystals
E05-25-3705		C15H18NO6P	339,29	252-257	yellowish crystals
E06-15-4864		C13H17N2O3P	280,27	231-233	yellowish crystals
E06-25-3706		C12H18NO6P	303,25	199-202	colorless crystals
E06-25-3708		C15H18NO6P	339,29	253-256	yellowish crystals
E07-25-3697		C10H16NO5P	261,22	213-215	colorless crystals

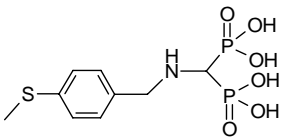
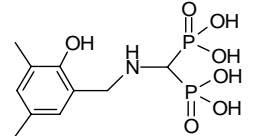
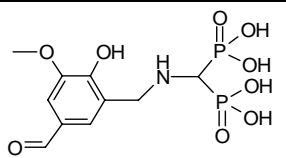
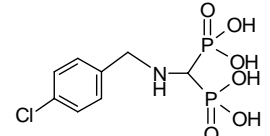
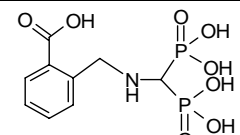
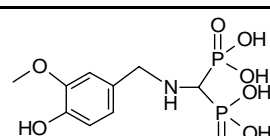
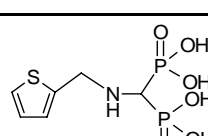
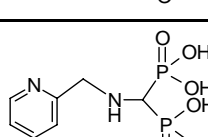
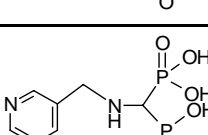
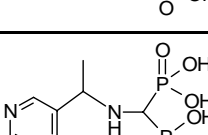
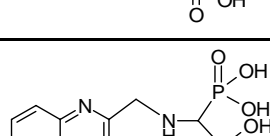
E07-25-3699		C11H16NO6P	289,23	121-126	colorless crystals
E07-25-3700		C14H16NO6P	325,26	243-252	yellowish crystals
E08-25-3711		C13H20NO6P	317,28	132-137	colorless crystals
E08-25-3712		C13H22NO4P	287,30	151-155	colorless crystals
E08-25-3713		C16H20NO6P	353,31	225-228	yellowish crystals
E09-48-4517		C11H18NO4P	259,24	248-250	colorless crystals
E09-48-4518		C10H15ClNO4P	279,66	248-250	colorless crystals
E09-48-4519		C11H16NO6P	289,23	193-195	colorless crystals
E09-48-4520		C11H18NO5P	275,24	232-235	colorless crystals
E09-48-4521		C14H18ClN2O4P	344,74	240-242	colorless crystals

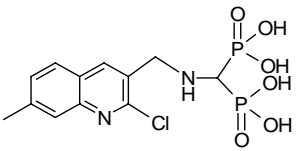
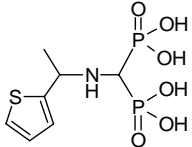
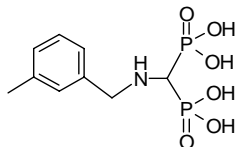
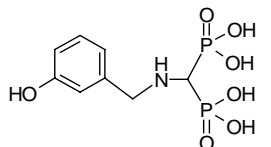
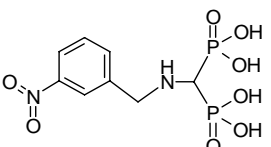
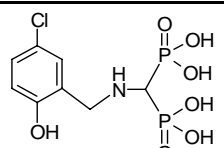
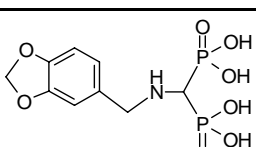
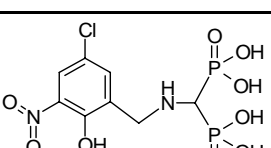
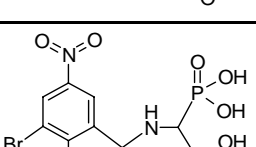
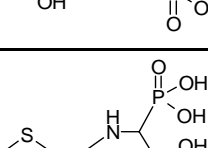
E09-48-4522		C ₁₁ H ₁₆ NO ₆ P	289,23	246-248	colorless crystals
E09-48-4523		C ₁₄ H ₂₅ N ₂ O ₄ P	316,34	198-202	cream-colored crystals
E09-48-4524		C ₁₀ H ₁₅ N ₂ O ₇ P	306,21	231-233	yellowish crystals
E09-48-4525		C ₉ H ₁₆ NO ₄ PS	265,27	246-248	colorless crystals
E09-48-4526		C ₉ H ₁₅ N ₂ O ₄ P	246,20	183-185	colorless crystals
E09-48-4527		C ₉ H ₁₅ N ₂ O ₄ P	246,20	146-150	colorless crystals
E09-48-4528		C ₉ H ₁₅ N ₂ O ₄ P	246,20	198-201	colorless crystals
E09-48-4529		C ₁₃ H ₁₇ N ₂ O ₄ P	296,27	252-255	paleyellow crystals
E10-51-4306		C ₁₁ H ₁₆ NO ₅ P	273,23	150-155	colorless crystals
E10-51-4307		C ₁₀ H ₁₃ ClNO ₅ P	293,65	158-162	colorless crystals

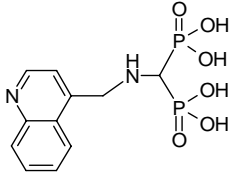
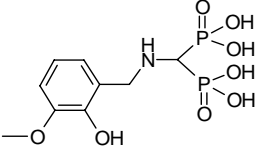
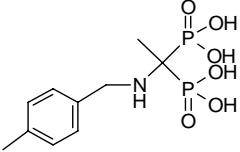
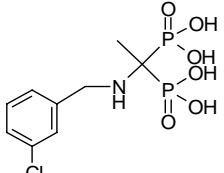
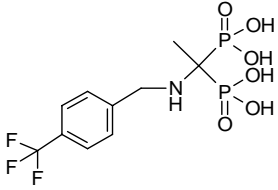
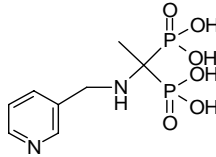
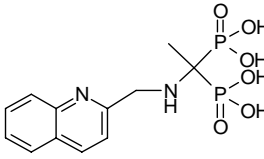
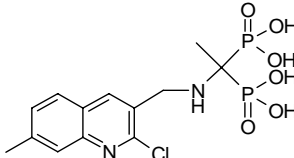
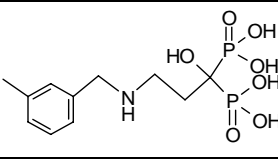
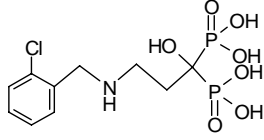
E10-51-4308		C10H13N2O7P	304,20	169-173	yellowish crystals
E10-51-4309		C11H16NO6P	289,23	151-155	colorless crystals
E10-51-4310		C11H16NO5PS	305,29	158-162	colorless crystals
E10-51-4311		C11H14NO7P	303,21	172-174	colorless crystals
E10-51-4312		C9H14NO5PS	279,25	164-169	colorless crystals
E10-51-4313		C13H15N2O5P	310,25	194-198	colorless crystals
E10-51A-4452		C11H13F3NO5P	327,20	182-184	colorless crystals
E10-51A-4453		C10H13ClNO6P	309,65	212-214	colorless crystals
E10-51A-4454		C12H18NO7P	319,25	190-193	colorless crystals
E11-51-4314		C14H20NO5P	313,29	178-180	colorless crystals

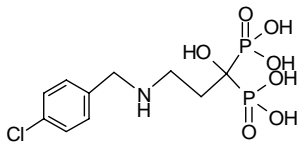
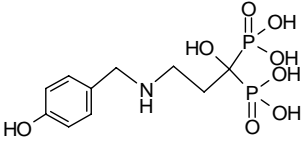
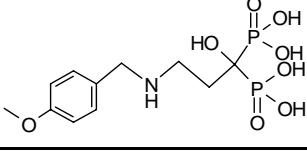
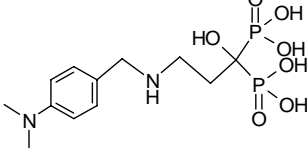
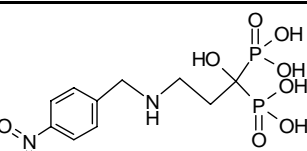
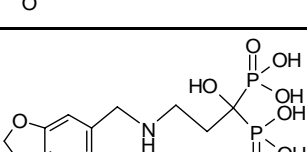
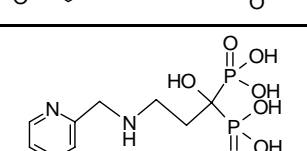
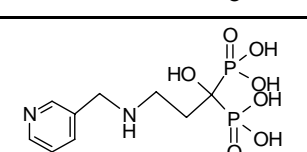
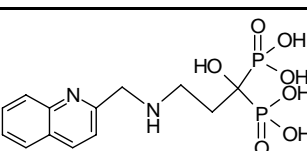
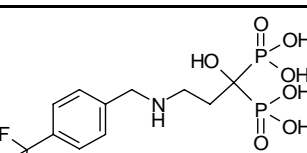
E11-51-4315		C ₁₂ H ₁₈ NO ₅ P	287,25	195-198	colorless crystals
E11-51-4316		C ₁₁ H ₁₅ ClNO ₅ P	307,67	177-180	colorless crystals
E11-51-4317		C ₁₁ H ₁₆ NO ₆ P	289,23	172-175	colorless crystals
E11-51-4318		C ₁₂ H ₁₈ NO ₆ P	303,25	173-175	colorless crystals
E11-51-4319		C ₁₁ H ₁₅ N ₂ O ₇ P	318,23	187-190	colorless crystals
E11-51-4320		C ₁₉ H ₂₀ NO ₅ P	373,35	198-201	cream-colored solid
E11-51-4321		C ₉ H ₁₄ NO ₅ PS	279,25	187-190	colorless crystals
E11-51-4322		C ₁₀ H ₁₅ N ₂ O ₅ P	274,22	182-184	colorless crystals

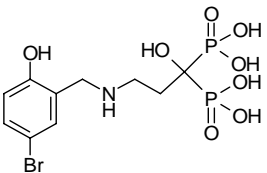
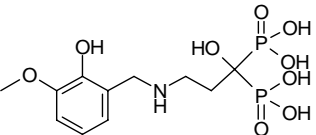
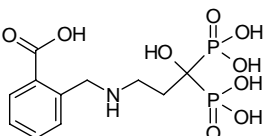
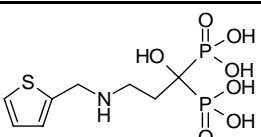
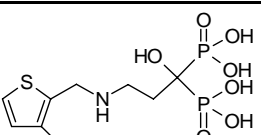
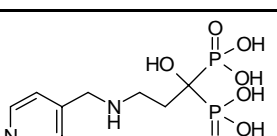
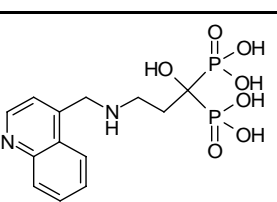
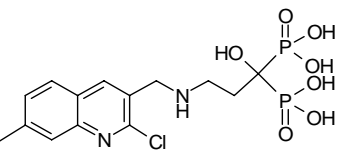
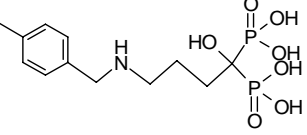
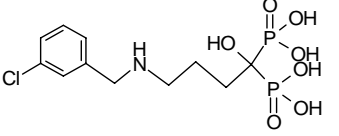
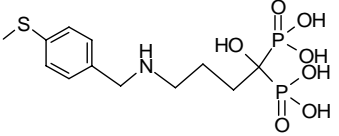
E11-51-4323		C ₁₅ H ₁₈ ClN ₂ O ₅ P	372,75	178-180	colorless crystals
E12-51-4293		C ₁₁ H ₁₆ NO ₅ PS	305,29	152-156	colorless crystals
E12-51A-4470		C ₁₁ H ₁₅ N ₂ O ₇ P	318,23	228-231	colorless crystals
E12-51A-4471		C ₁₂ H ₁₅ F ₃ NO ₅ P	341,23	208-211	colorless crystals
E12-51A-4473		C ₁₀ H ₁₆ NO ₅ PS	293,28	200-204	colorless crystals
E12-51A-4477		C ₁₂ H ₁₆ NNa ₂ O ₅ P	331,22	250-255	white solid
E12-51A-4478		C ₁₃ H ₂₀ NO ₅ P	301,28	204-206	colorless crystals
E12-51A-4479		C ₁₃ H ₂₀ NO ₅ PS	333,35	210-213	colorless crystals
E12-51A-4480		C ₁₆ H ₂₀ ClN ₂ O ₅ P	386,78	198-205	yellowish crystals
E13-48-4119		C ₇ H ₁₂ N ₂ O ₆ P ₂	282,13	248-251	colorless crystals
E13-48-4121		C ₇ H ₁₃ NO ₇ P ₂	285,13	245-247	slightly beige crystals

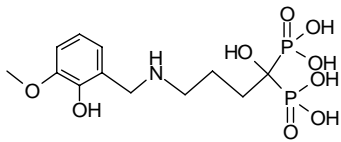
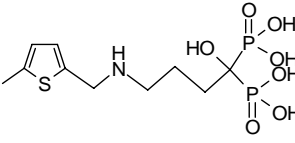
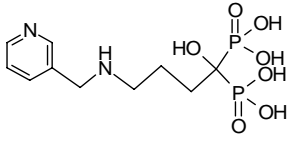
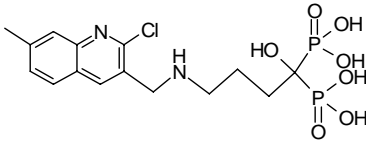
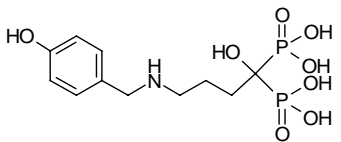
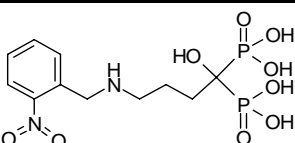
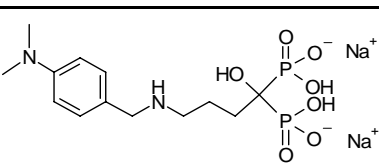
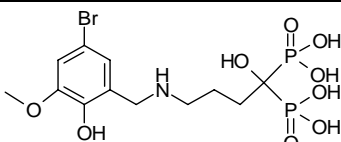
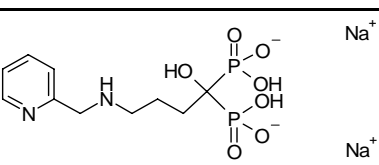
E13-48-4122		C9H15NO6P2S	327,23	243-246	colorless crystals
E13-48-4123		C10H17NO7P2	325,20	228-230	colorless crystals
E13-48-4124		C10H15NO9P2	355,18	225-228	colorless crystals
E13-48-4250		C8H12ClNO6P2	315,59	272-276	colorless crystals
E13-48-4251		C9H13NO8P2	325,15	196-200	colorless crystals
E13-48-4252		C9H15NO8P2	327,17	255-258	cream-colored crystals
E13-48-4254		C6H11NO6P2S	287,17	290-295	colorless crystals
E13-48-4255		C7H12N2O6P2	282,13	242-247	colorless crystals
E13-48-4256		C7H12N2O6P2	282,13	172-178	colorless crystals
E13-48-4257		C8H14N2O6P2	296,16	216-222	colorless crystals
E13-48-4258		C11H14N2O6P2	332,19	260-263	light yellow crystals

E13-48-4259		C ₁₂ H ₁₅ ClN ₂ O ₆ P ₂	380,66	268-271	colorless crystals
E13-48-4384		C ₇ H ₁₃ NO ₆ P ₂ S	301,20	260-262	cream-colored crystals
E13-48-4396		C ₉ H ₁₅ NO ₆ P ₂	295,17	251-254	colorless crystals
E13-48-4397		C ₈ H ₁₃ NO ₇ P ₂	297,14	225-228	colorless crystals
E13-48-4398		C ₈ H ₁₂ N ₂ O ₈ P ₂	326,14	286-290	yellowish crystals
E13-48-4399		C ₈ H ₁₂ ClNO ₇ P ₂	331,59	262-266	colorless crystals
E13-48-4400		C ₉ H ₁₃ NO ₈ P ₂	325,15	246-250	colorless crystals
E13-48-4401		C ₈ H ₁₁ ClN ₂ O ₉ P ₂	376,59	278-283	pale yellow crystals
E13-48-4402		C ₈ H ₁₁ BrN ₂ O ₉ P ₂	421,04	215-220	yellowish crystals
E13-48-4403		C ₇ H ₁₃ NO ₆ P ₂ S	301,20	286-290	colorless crystals

E13-48-4404		C11H14N2O6P2	332,19	219-222	colorless crystals
E13-48-4513		C9H15NO8P2	327,17	241-244	slightly beige crystals
E14-48-4408		C10H17NO6P2	309,20	201-205	colorless crystals
E14-48-4409		C9H14ClNO6P2	329,62	204-206	colorless crystals
E14-48-4410		C10H14F3NO6P2	363,17	225-227	colorless crystals
E14-48-4414		C8H14N2O6P2	296,16	240-243	colorless crystals
E14-48-4415		C12H16N2O6P2	346,22	233-237	salmon-pink crystals
E14-48-4416		C13H17ClN2O6P2	394,69	286-290	colorless crystals
E15-48-4260		C11H19NO7P2	339,22	202-207	colorless crystals
E15-48-4261		C10H16ClNO7P2	359,64	220--228	colorless crystals

E15-48-4262		C10H16ClNO7P2	359,64	217-222	colorless crystals
E15-48-4263		C10H17NO8P2	341,20	275-278	colorless crystals
E15-48-4264		C11H19NO8P2	355,22	224-230	colorless crystals
E15-48-4265		C12H22N2O7P2	368,27	238-240	colorless crystals
E15-48-4266		C10H16N2O9P2	370,19	264-267	cream-colored crystals
E15-48-4267		C11H17NO9P2	369,21	239-242	colorless crystals
E15-48-4268		C9H16N2O7P2	326,18	207-210	colorless crystals
E15-48-4269		C9H16N2O7P2	326,18	255-258	colorless crystals
E15-48-4270		C13H18N2O7P2	376,25	170-177	cream-colored crystals
E15-48-4419		C11H16F3NO7P2	393,20	157-160	colorless crystals

E15-48-4420		C10H16BrNO8P2	420,09	226-230	colorless crystals
E15-48-4421		C11H19NO9P2	371,22	218-223	light beige crystals
E15-48-4422		C11H17NO9P2	369,21	187-190	colorless crystals
E15-48-4423		C8H15NO7P2S	331,22	250-253	colorless crystals
E15-48-4424		C9H17NO7P2S	345,25	216-221	colorless crystals
E15-48-4425		C9H16N2O7P2	326,18	195-200	colorless crystals
E15-48-4426		C13H18N2O7P2	376,25	244-246	light beige crystals
E15-48-4427		C14H19ClN2O7P2	424,72	221-226	yellowish crystals
E16-48-4272		C12H21NO7P2	353,25	167-170	colorless crystals
E16-48-4273		C11H18ClNO7P2	373,67	209-215	colorless crystals
E16-48-4274		C12H21NO7P2S	385,32	196-199	colorless crystals

E16-48-4275		C ₁₂ H ₂₁ NO ₉ P ₂	385,25	171-175	colorless crystals
E16-48-4277		C ₁₀ H ₁₉ NO ₇ P ₂ S	359,28	215-220	colorless crystals
E16-48-4278		C ₁₀ H ₁₈ N ₂ O ₇ P ₂	340,21	225-228	colorless crystals
E16-48-4279		C ₁₅ H ₂₁ ClN ₂ O ₇ P ₂	438,74	170-173	colorless crystals
E16-48-4433		C ₁₁ H ₁₉ NO ₈ P ₂	355,22	117-121	colorless solid
E16-48-4434		C ₁₁ H ₁₈ N ₂ O ₉ P ₂	384,22	165-170	colorless solid
E16-48-4435		C ₁₃ H ₂₂ N ₂ Na ₂ O ₇ P ₂	426,26	233-238	colorless crystals
E16-48-4436		C ₁₂ H ₂₀ BrNO ₉ P ₂	464,15	205-209	cream-colored powder
E16-48-4437		C ₁₀ H ₁₆ N ₂ Na ₂ O ₇ P ₂	384,18	180-185	white powder