

<p>This Class 534 is considered to be an integral part of Class 260 (see the Class 260 schedule for the position of this Class in schedule hierarchy). This Class retains all pertinent definitions and class lines of Class 260.</p> <p>ORGANIC COMPOUNDS (CLASS 532, SUBCLASS 1)</p> <p>7 ..Noble gas containing (i.e., He, Ne, Ar, Kr, Xe, or Rn containing)</p> <p>10 ..RADIOACTIVE METAL CONTAINING (At. No. 43, 61 or 84+; or radioactive isotope of another metal)</p> <p>11 ..Actinide series metal (At. No. 89+)</p> <p>12 ...Containing -C(=X)-, wherein X is chalcogen (e.g., carbonyl containing, etc.)</p> <p>13The -C(=X)- is part of a -C(=X)X- group, wherein the X's are the same or diverse chalcogens</p> <p>14 ..Technetium containing (At. No. 43; Tc)</p> <p>15 ..RARE EARTH METAL CONTAINING (At. No. 21, 39, 57-60 or 62-71)</p> <p>16 ..Containing -C(=X)X-, wherein the X's are the same or diverse chalcogens</p> <p>550 ..Diazoamino (e.g., triazenes, etc.)</p> <p>551 ..Hetero ring containing</p> <p>552 ..Chalcogen or additional nitrogen bonded directly to the diazoamino group</p> <p>553 ..Noncarbon atom double or triple bonded and the diazoamino group bonded directly to the same acyclic carbon</p> <p>554 ..Plural benzene rings bonded directly to the diazoamino group</p> <p>555 ..Processes</p> <p>556 ..Diazooxide or diazotate (e.g., -N=N-O-, etc.)</p> <p>557 ..Sulfur attached directly to a ring by nonionic bonding</p>	<p>558 ..Diazo or diazonium (e.g., -N=N-C, etc.)</p> <p>559 ..With preservative or stabilizer</p> <p>560 ..Hetero ring containing</p> <p>561 ..Plural diazo or diazonium groups</p> <p>562 ..Heavy metal or aluminum containing</p> <p>563 ..Polycyclo ring system having at least three cyclos</p> <p>564 ..Aldehyde or ketone group containing</p> <p>565 ..Formation of diazonium group</p> <p>566 ..Azoxy</p> <p>567 ..Hetero ring containing</p> <p>568 ..Azodioxy</p> <p>569 ..Heavy metal or aluminum containing</p> <p>570 ..Sulfonic acid group containing (- (O=)S(=O)-OH, wherein H of -OH may be replaced by a substituted or unsubstituted ammonium ion or metal)</p> <p>571 ...Stilbene containing</p> <p>572 ..Formation of azoxy group</p> <p>573 ..Azo</p> <p>574 ..Quaternary azo group containing</p> <p>575 ..Specified crystalline form</p> <p>576 ..With preservative or stabilizer</p> <p>577 ..Liquid crystal (e.g., pleochroic, etc.)</p> <p>578 ..Formation of azo group by oxidative coupling</p> <p>579 ..Formation of azo group by simultaneous diazotization and coupling</p> <p>580 ..Formation of azo group from diazoamino group</p> <p>581 ..Formation of azo group by coupling diazonium compound with coupling component in presence of an additional organic compound</p> <p>582 ..Formation of azo group by coupling diazonium compound with coupling component at a specified pH range</p> <p>583 ..Formation of azo group by coupling diazonium compound with coupling component in presence of ammonia, a Group IIA light metal hydroxide or a Group IA or IIA light metal phosphate</p>
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- 584 ..Formation of azo group by coupling diazonium compound with coupling component in other than stoichiometric proportions
- 585 ..Formation of azo group by reduction of nitro group
- 586 ..Formation of azo group from group having nitrogen single bonded to nitrogen
- 587 ..Formation of azo group directly from nitrogen containing compound by process other than diazotization and coupling
- 588 ..Process utilizing azo compound as reactant
- 589 ...Formation of quaternary ammonium or hydrazinium group
- 590 ...Ring formation
- 591 ...Formation of $-C(=X)HNH$ group, wherein X is chalcogen (substitution may be made for hydrogen only)
- 592 ...Formation of sulfonamide group
- 593 ...Additional reactant containing phosphorus or sulfur
- 594 ...Sulfonic acid group formed or added to the azo reactant ($(O=)S(=O)-OH$, wherein H of $-OH$ may be replaced by a substituted or unsubstituted ammonium ion or metal)
- 595 ...Formation of $-C(=X)X-$ ester group, wherein the X's may be the same or diverse chalcogens
- 596 ...Etherification of hydroxy group
- 597 ..Replacement of halogen by cyano group
- 598 ..Replacement of halogen by amino nitrogen
- 599 ...Hydrolysis
- 600 ...Reduction of nitro or nitrogen oxide group
- 601 ...Nitration
- 602 ..Metallization of the azo reactant in presence of an additional organic compound
- 603 ..Quaternary ammonium or hydrazinium attached indirectly to an azo group by nonionic bonding
- 604 ...Hetero ring containing
- 605The pentavalent nitrogen is a ring member
- 606Azo bonded directly to a hetero ring or to a polycyclo ring system having a hetero ring as one of the cyclos
- 607The hetero ring contains the pentavalent nitrogen
- 608Plural azo groups in the same azo moiety attached indirectly to each other by nonionic bonding
- 609Acyclic carbon bonded directly to the azo group
- 610Additional hetero ring or polycyclo ring system having a hetero ring as one of the cyclos bonded directly to the azo group
- 611The hetero ring is one of the cyclos in a polycyclo ring system
- 612Acyclic $-C(=X)-$, wherein X is chalcogen, attached directly or indirectly to the hetero ring by nonionic bonding
- 613 ...Heavy metal or aluminum containing
- 614 ...Plural azo groups attached indirectly to each other by nonionic bonding
- 615 ...Plural nitrogens bonded directly to the same alkylene chain (e.g., diamino alkylene, etc.)
- 616 ..Nitrogen oxide, other than as nitro or nitroso, containing
- 617 ..Fiber- or substrate-reactive azo compound
- 618 ...Formazan containing (i.e., $HNH-N=CH-N=NH$, wherein substitution may be made for hydrogen only)
- 619 ...Heavy metal or aluminum containing
- 620 ...Halogen attached directly to a hetero ring or to an alicyclic ring by nonionic bonding
- 621Stilbene containing
- 622The hetero ring is six-membered and contains at least two nitrogens

- 623Diverse azo moieties bonded to the same metal
- 624At least two such hetero rings attached indirectly to each other by nonionic bonding
- 625Plural azo groups in the same azo moiety attached indirectly to each other by nonionic bonding
- 626Chalcogen or carbon bonded directly to the six-membered hetero ring and is between the hetero ring and the azo group
- 627Plural halogens attached directly to the hetero ring by nonionic bonding
- 628Diverse hetero ring containing
- 629 ...Alkylene, alkenyl or alkenylene bonded directly to sulfonyl or sulfonamide, which sulfonyl or sulfonamide is between a ring and the alkylene, alkenyl or alkenylene
- 630 ...Halogen attached directly to a hetero ring or to an alicyclic ring by nonionic bonding
- 631Stilbene containing
- 632The hetero ring is six-membered and contains at least two nitrogens
- 633Polycyclo ring system having the hetero ring as one of the cyclos
- 634At least two such hetero rings attached indirectly to each other by nonionic bonding
- 635Additional hetero ring containing
- 636Pyrazole containing (including hydrogenated)
- 637Plural azo groups attached indirectly to each other by nonionic bonding
- 638The hetero ring and benzene ring, to which an azo group is bonded directly, bonded directly to the same nitrogen
- 639 ...Aziridine containing (including unsaturated)
- 640 ...Alkylene, alkenyl, alkenylene, alkynyl or alkynylene attached directly or indirectly to a ring by nonionic bonding
- 641 ...Alkylene, alkenyl or alkenylene bonded directly to sulfonyl or sulfonamido, which sulfonyl or sulfonamido is between a ring and the alkylene, alkenyl or alkenylene
- 642The alkylene, alkenyl or alkenylene and the ring are both bonded directly to the same sulfonyl group
- 643 ...Alkylene, alkenyl or alkenylene bonded directly to carboxamido, urea or $-C(=X)-$, wherein X is chalcogen, which group is between a ring and the alkylene, alkenyl or alkenylene
- 644 ...Alkylene, alkenyl or alkenylene and a ring bonded directly to the same chalcogen or to plural chalcogens which are bonded directly to each other
- 645 ..Plural sulfonyl groups bonded directly to same amino nitrogen (e.g., sulfonylamino sulfonyl, etc.)
- 646 ..Sulfonyl and carbonyl bonded directly to the same amino nitrogen (e.g., sulfonylamino carbonyl, etc.)
- 647 ..Plural amino nitrogens bonded directly to the same sulfonyl (e.g., aminosulfonylamino, etc.)
- 648 ..Alkyl, having at least eight carbons specified, or plural alkyl chains, each having at least five carbons specified, bonded directly to a ring, which ring is attached directly or indirectly to an acyclic carbon chain, which chain is bonded directly to a urea or carboxamide nitrogen that is between the chain and an additional ring
- 649 ..Alkyl chain having at least eight carbons specified bonded directly to a ring
- 650 ..Sulfonyl or $-C(=X)-$, wherein X is chalcogen, between a ring and an alkyl chain having at least eight carbons specified

- 651 ...The sulfonyl or $-C(=X)-$ is bonded directly to the ring
- 652 ..Formazan containing (i.e., $HNH-N=CH-N=NH$, wherein substitution may be made for hydrogen only)
- 653 ..Polycyclo carbocyclic ring system having at least three cyclos
- 654 ...The polycyclo ring system consists of three six-membered cyclos and has plural oxygens bonded directly thereto
- 655Hetero ring containing
- 656At least two such ring systems having plural oxygens bonded directly thereto
- 657 ...The polycyclo ring system has no azo group bonded directly thereto
- 658 ...Chalcogen double bonded directly to the polycyclo ring system
- 659 ..Bicyclo carbocyclic ring system consisting of a six-membered ring and a five-membered ring (e.g., indane, etc.)
- 660 ..Hydroxy and carbonyl of $-COO-$ bonded directly to a monocyclic benzene ring (H or hydroxy may be replaced by a substituted or unsubstituted ammonium ion or a metal)
- 661 ...Heavy metal or aluminum containing
- 662Hetero ring containing
- 663Plural azo groups in the same azo moiety attached indirectly to each other by nonionic bonding
- 664 ...Hetero ring containing
- 665Azo bonded directly to the hetero ring or to a polycyclo ring system which contains the hetero ring as one of the cyclos
- 666 ...At least three azo groups attached indirectly to each other by nonionic bonding
- 667Plural monocyclic benzene rings, each having hydroxy and carbonyl of $-COO-$ bonded directly thereto
- 668Additional monocyclic benzene ring having plural hydroxy groups, hydroxy and nitrogen, or plural nitrogens bonded directly thereto, wherein the nitrogen is other than as nitro, nitroso or azo
- 669Additional $-C(=X)-$, wherein X is chalcogen
- 670 ...Two azo groups attached indirectly to each other by nonionic bonding
- 671Sulfonic acid group containing $-(O=S(=O)-OH$, wherein H of $-OH$ may be replaced by a substituted or unsubstituted ammonium ion or metal)
- 672Plural monocyclic benzene rings, each having hydroxy and carbonyl of $-COO-$ bonded directly thereto
- 673Additional $-C(=X)-$, wherein X is chalcogen
- 674 ...Sulfonic acid group containing $-(O=S(=O)-OH$, wherein H of $-OH$ may be replaced by a substituted or unsubstituted ammonium ion or metal)
- 675 ...Azo attached indirectly to the monocyclic benzene ring by nonionic bonding
- 676 ..Plural $-HNH$ groups or $-OH$ and $-HNH$ bonded directly to a monocyclic benzene ring (H of $-OH$ may be replaced by a substituted or unsubstituted ammonium ion or metal)
- 677 ...Plural azo groups in the same azo moiety attached indirectly to each other by nonionic bonding
- 678Sulfonic acid group containing $-(O=S(=O)-OH$, wherein H of $-OH$ may be replaced by a substituted or unsubstituted ammonium ion or metal)
- 679Plural monocyclic benzene rings, each having $-OH$ and $-HNH$ or plural $-HNH$ groups bonded directly thereto
- 680Exactly three azo groups attached indirectly to each other by nonionic bonding

681	...Sulfonic acid group containing (-O=S(=O)-OH, wherein H of -OH may be replaced by a substituted or unsubstituted ammonium ion or metal)	702	....Polycyclo ring system containing the hetero ring as one of the cyclos
682	..Plural hydroxy groups or esters thereof bonded directly to a monocyclic benzene ring (H of hydroxy may be replaced by a substituted or unsubstituted ammonium ion or metal)	703	.....Azo bonded directly to the polycyclo ring system
683	...Azo bonded directly to the benzene ring	704	.....The azo group is attached indirectly in the same azo moiety to an additional azo group or to an acyclic chain which contains a -CH=N- group by nonionic bonding
684	....Heavy metal or aluminum containing	705	.....Plural ring nitrogens in the polycyclo ring system
685	....At least three azo groups attached indirectly to each other by nonionic bonding	706	.....Quinoline or isoquinoline containing (including hydrogenated)
686	.....Hetero ring containing	707	...Azo bonded directly to the hetero ring
687	.....Plural monocyclic benzene rings, each having plural hydroxy groups or esters thereof bonded directly thereto	708	....At least three azo groups in the same azo moiety attached indirectly to each other by nonionic bonding
688	....Two azo groups attached indirectly to each other by nonionic bonding	709	.....Two azo groups in the same azo moiety attached indirectly to each other by nonionic bonding
689	..Stilbene containing	710	.....Pyrazole (including hydrogenated)
690	...Heavy metal or aluminum containing	711	.....Sulfonyl bonded directly to a ring
691	...Hetero ring containing	712	.....Additional chalcogen bonded directly to the sulfonyl
692	..Heavy metal or aluminum containing	713	...Benzene ring containing
693	...Amine salt	714	...At least three azo groups in the same azo moiety attached indirectly to each other by nonionic bonding
694	...Arsenic containing	715	.....Plural monocyclic benzene rings attached directly to each other by nonionic bonding and are between azo groups
695	...Azo moiety and moiety which contains acyclic -CH=N- group bonded to the same metal	716	...Two azo groups in the same azo moiety attached indirectly to each other by nonionic bonding
696	..Diverse azo moieties bonded to the same metal	717	.....Containing -C(=X)-, wherein X is chalcogen (e.g., carbonyl, etc.)
697	....Hetero ring containing	718	.....Plural monocyclic benzene rings attached directly or indirectly to each other by acyclic nonionic bonding and are between the azo groups
698	.....Hetero ring in each azo moiety		
699	....Plural azo groups in the same azo moiety attached indirectly to each other by nonionic bonding		
700	...Azo bonded directly to an acyclic carbon which is bonded directly to two acyclic carbons, each of which is double or triple bonded to an atom		
701	...Hetero ring containing		

- 719Plural monocyclic benzene rings attached directly or indirectly to each other by acyclic nonionic bonding and are between the azo groups
- 720Containing $-C(=X)-$, wherein X is chalcogen (e.g., carbonyl, etc.)
- 721Nitrogen bonded directly to the $-C(=X)-$ group (e.g., carboxamide, etc.)
- 722Plural bicyclo carbocyclic ring systems bonded directly to the azo group
- 723Sulfonyl bonded directly to amino nitrogen (e.g., sulfonamide, etc.)
- 724Sulfonic acid group containing $-(O=S(=O))-OH$, wherein H of $-OH$ may be replaced by the ammonium ion or a metal)
- 725Amino nitrogen containing
- 726 ..Boron or silicon containing
- 727 ..Phosphorus attached indirectly to an azo group by nonionic bonding
- 728 ..Amine salt
- 729 ..Chain containing at least fifteen alkylene oxide groups
- 730 ..Sulfonic acid ester group containing
- 731 ..Hetero ring containing
- 732 ..Nitrogen, other than as azo, and chalcogen or $-C(=X)X-$ bonded directly to a $-C(=X)-$ group, wherein the X's may be the same or diverse chalcogens (e.g., carbamic, allophanic, etc.)
- 733 ..Hetero ring containing
- 734 ..Halogen bonded directly to sulfur or to a $-C(=X)-$ group, wherein X is chalcogen
- 735 ..Containing acyclic $-XCN$ or $-NCX$, wherein X is chalcogen (e.g., thiocyanato, isocyanato, etc.)
- 736 ..Thiosulfuric acid group containing $-S(=O)=S(=O)-OH$, wherein H of the $-OH$ may be replaced by the ammonium ion or Group IA or IIA light metal)
- 737 ..Cyano and carbon bonded directly to acyclic nitrogen
- 738 ..Acyclic chain which contains $-CH=N-$ (substitution may be made for hydrogen only)
- 739 ..Azo bonded directly to an acyclic carbon which is bonded directly to two acyclic carbons, each of which is double or triple bonded to an atom
- 740 ...Hetero ring or polycyclic ring system which contains a hetero ring as one of the cyclos bonded directly to an azo group
- 741 ..Hetero ring attached indirectly to an azo group by nonionic bonding
- 742The acyclic carbon, to which the other two acyclic carbons are bonded, is between the hetero ring and the azo group
- 743 ...At least three azo groups attached indirectly to each other by nonionic bonding
- 744 ...Two azo groups attached indirectly to each other by nonionic bonding
- 745Each azo group is bonded directly to an acyclic carbon which is bonded directly to two acyclic carbons, each of which is double or triple bonded to an atom
- 746Plural benzene rings bonded directly to each other and are between the azo groups
- 747Each benzene ring is bonded directly to an azo group
- 748Plural amino nitrogens bonded directly to a benzene ring which is between the azo groups
- 749 ..Sulfonyl bonded directly to nitrogen
- 750 ..Having $-C(=X)-$, wherein X is chalcogen, attached indirectly by nonionic bonding to the acyclic carbon to which the other two acyclic carbons are bonded
- 751 ..Hetero ring containing
- 752 ...Polycyclic ring system having a hetero atom shared by at least two rings or at least two hetero atoms which are not members of the same ring

- 753 ...Azo bonded directly to the hetero ring or to a polycyclo ring system which contains the hetero ring as one of the cyclos
- 754 ...At least three azo groups attached indirectly to each other by nonionic bonding
- 755Additional hetero ring or polycyclo ring system which contains a hetero ring as one of the cyclos bonded directly to an azo group
- 756 ...Two azo groups attached indirectly to each other by nonionic bonding
- 757Additional hetero ring or polycyclo ring system which contains a hetero ring as one of the cyclos bonded directly to an azo group
- 758Both hetero rings or polycyclo ring systems are between the azo groups
- 759Plural monocyclic benzene rings, each bonded directly to an azo group, are between the azo groups
- 760The benzene rings are bonded directly to each other
- 761Both azo groups are bonded directly to the hetero ring or to the polycyclo ring system
- 762Polycyclo ring system having at least three cyclos, at least one of which is a hetero ring
- 763Bicyclo carbocyclic ring system
- 764Additional ring bonded directly to the hetero ring or to the polycyclo ring system
- 765 ...Additional hetero ring or polycyclo ring system which contains a hetero ring as one of the cyclos bonded directly to the azo group
- 766The hetero ring is six-membered and contains nitrogen (e.g., pyridine, etc.)
- 767The hetero ring contains at least two nitrogens (e.g., pyrimidine, etc.)
- 768The hetero ring is in a bicyclo ring system (e.g., quinoline, benzomorpholine, etc.)
- 769Pyrazole (including hydrogenated)
- 770 ...The hetero ring is six-membered and consists of one nitrogen and five carbons (e.g., pyridine, etc.)
- 771Acyclic oxygen bonded directly to the hetero ring
- 772Plural acyclic chalcogens bonded directly to the hetero ring at the two positions adjacent to the ring nitrogen
- 773Plural acyclic nitrogens, other than as nitro, nitroso or azo, bonded directly to the hetero ring at the two positions adjacent to the ring nitrogen
- 774 ...Additional hetero ring attached indirectly to the azo group by nonionic bonding
- 775The additional hetero ring or a polycyclo ring system which contains the additional hetero ring as one of the cyclos is bonded directly to a ring, which ring is between the azo group and the additional hetero ring
- 776A ring and the additional hetero ring or a polycyclo ring system which contains the additional hetero ring as one of the cyclos are bonded directly to the same nitrogen
- 777The additional hetero ring or a polycyclo ring system which contains the additional hetero ring as one of the cyclos is bonded directly to an alkylene chain, which chain is between the azo group and the additional hetero ring
- 778 ...Bicyclo carbocyclic ring system bonded directly to the azo group
- 779The bicyclo carbocyclic ring system is between the azo group and an additional carbocyclic ring

- 780Sulfonic acid group containing $-(O=S(=O)-OH$, wherein H of the $-OH$ may be replaced by the ammonium ion or Group IA or IIA light metal)
- 781Sulfonic acid group containing $-(O=S(=O)-OH$, wherein H of the $-OH$ may be replaced by the ammonium ion or a Group IA or IIA light metal)
- 782The hetero ring is one of the cyclos in a polycyclo ring system
- 783Additional sulfonyl containing
- 784Plural sulfonic acid groups
- 785Containing acyclic $-C(=X)-$, wherein X is chalcogen
- 786The $-C(=X)-$ is bonded directly to nitrogen
- 787The hetero ring is one of the cyclos in a polycyclo ring system
- 788The hetero ring consists of sulfur, nitrogen and carbon (e.g., benzothiazole, etc.)
- 789Chalcogen double bonded directly to the hetero ring
- 790The hetero ring is five-membered and consists of one nitrogen and four carbons (e.g., indole, etc.)
- 791Carbocyclic ring bonded directly to the hetero ring or to the polycyclo ring system which contains the hetero ring
- 792Pyrazole containing (including hydrogenated)
- 793Sulfonyl containing
- 794Carbocyclic ring attached indirectly to the azo group by nonionic bonding
- 795The hetero ring is five-membered and contains at least one atom each of sulfur, nitrogen and carbon
- 796 ...At least three azo groups attached indirectly to each other by nonionic bonding
- 797 ...Two azo groups attached indirectly to each other by nonionic bonding
- 798 ...Plural carbocyclic rings bonded directly to the azo group
- 799The hetero ring or a polycyclo ring system which contains the hetero ring as one of the cyclos is bonded directly to one of the carbocyclic rings or to a bicyclo ring system which contains the carbocyclic ring as one of the cyclos
- 800The hetero ring is one of the cyclos in a polycyclo ring system
- 801The carbocyclic ring or a bicyclo ring system which contains the carbocyclic ring as one of the cyclos and the hetero ring or a polycyclo ring system which contains the hetero ring as one of the cyclos are bonded directly to the same carboxamide group
- 802The carbocyclic ring or a bicyclo ring system which contains the carbocyclic ring as one of the cyclos and the hetero ring or a polycyclo ring system which contains the hetero ring as one of the cyclos are bonded directly to the same nitrogen atom
- 803The hetero ring is six-membered and contains at least two nitrogens
- 804The hetero ring or a polycyclo ring system which contains the hetero ring as one of the cyclos is bonded directly to an alkylene chain, which chain is between the hetero ring and the carbocyclic ring
- 805 ..Exactly five or exactly six azo groups attached indirectly to each other by nonionic bonding
- 806 ..Exactly four azo groups attached indirectly to each other by nonionic bonding
- 807 ...Plural nitrogens bonded directly to the same $-C(=X)-$ group, wherein X is chalcogen (e.g., urea, thiourea, etc.)
- 808 ...Benzidine containing

- 809 ..Exactly three azo groups attached indirectly to each other by nonionic bonding
- 810 ...Containing $-C(=X)-$, wherein X, is chalcogen or nitrogen (e.g., carbonyl, etc.)
- 811 ...Nitrogen single bonded directly to the $-C(=X)-$ group (e.g., carboxamide, guanlyl, etc.)
- 812Plural $-C(=X)-$ groups containing
- 813 ..Benzidine containing
- 814 ...Hydroxy and nitrogen, other than as nitro, nitroso or azo, bonded directly to the same bicyclo ring system (H of hydroxy may be replaced by the ammonium ion or a Group IA or IIA light metal)
- 815 ...Hydroxy bonded directly to a bicyclo ring system (H of hydroxy may be replaced by the ammonium ion or a Group IA or IIA light metal)
- 816 ..Exactly two azo groups attached indirectly to each other by nonionic bonding
- 817 ...Plural benzene rings bonded directly to the same urea or thiourea group and are between the azo groups
- 818Bicyclo ring system containing
- 819 ...Plural benzene rings bonded directly to the same carboxamide or sulfonamide group and are between the azo groups
- 820Plural carboxamide groups between the azo groups
- 821 ..Plural benzene rings bonded directly to the same chalcogen or $-C(=X)-$ group, wherein X is chalcogen, and are between the azo groups
- 822 ...Plural benzene rings bonded directly to each other and are between the azo groups
- 823Containing $-C(=X)-$, wherein X is chalcogen (e.g., carbonyl, etc.)
- 824Nitrogen, other than as nitro, nitroso or azo, attached indirectly to azo by nonionic bonding
- 825Plural nitrogens, other than as nitro, nitroso or azo, attached indirectly to azo by nonionic bonding
- 826Plural sulfonic acid groups bonded directly to the same bicyclo ring system ($(=O)S(=O)-OH$, wherein H of the $-OH$ may be replaced by the ammonium ion or a Group IA or IIA light metal)
- 827 ..Hydroxy bonded directly to a bicyclo ring system which is between the azo groups (H of hydroxy may be replaced by a substituted or unsubstituted ammonium ion or a Group IA or IIA light metal)
- 828 ...Plural bicyclo ring systems, each having hydroxy bonded directly thereto
- 829 ...Containing $-C(=X)-$, wherein X is chalcogen (e.g., carbonyl, etc.)
- 830 ...Hydroxy and the $-C(=X)-$ are bonded directly to the same bicyclo ring system (H of hydroxy may be replaced by a substituted or unsubstituted ammonium ion or a Group IA or IIA light metal)
- 831 ...Plural benzene rings bonded directly to each azo group
- 832At least one of the benzene rings is part of a bicyclo ring system
- 833Each of the benzene rings is part of a bicyclo ring system
- 834Hydroxy bonded directly to the bicyclo ring system (H of hydroxy may be replaced by the ammonium ion or a Group IA or IIA light metal)
- 835Plural bicyclo ring systems, each having hydroxy bonded directly thereto
- 836Additional hydroxy or nitrogen, other than as nitro, nitroso or azo, bonded directly to the bicyclo ring system

- 837Sulfonic acid group bonded directly to the bicyclo ring system ($-(O=S(=O)OH)$, wherein H of the $-OH$ may be replaced by the ammonium ion or a Group IA or IIA light metal)
- 838 ..Exactly one azo group containing or azo attached indirectly to an additional azo group by ionic bonding
- 839 ...Plural benzene rings bonded directly to the azo group
- 840Each of the benzene rings is part of a bicyclo ring system
- 841Containing $-C(=X)-$, wherein X is chalcogen (e.g., carbonyl, etc.)
- 842Hydroxy bonded directly at the 2-position of the bicyclo ring system (H of hydroxy may be replaced by the ammonium ion or a Group IA or IIA light metal)
- 843 ...Each of the benzene rings is monocyclic
- 844Sulfonyl containing
- 845Oxygen bonded directly to the sulfonyl group (e.g., sulfonic acid, etc.)
- 846Plural oxygens bonded directly to the sulfonyl group (e.g., sulfuric acid, etc.)
- 847The sulfonyl is part of a sulfonamide group ($-(O=S(=O)H_2N)$, wherein substitution may be made for hydrogen only)
- 848Containing $-C(=X)-$, wherein X is chalcogen
- 849The $-C(=X)-$ is bonded directly to nitrogen, which nitrogen is bonded directly to a ring
- 850Containing $-C(=X)-$, wherein X is chalcogen
- 851The $-C(=X)-$ is bonded directly to one of the benzene rings
- 852The $-C(=X)-$ is in a $-C(=X)X-$ group, wherein the X's may be the same or diverse chalcogens
- 853The $-C(=X)X-$ is in a $-COOH$ group (H of OH may be replaced by the ammonium ion or a Group IA or IIA light metal)
- 854Additional $-C(=X)-$ bonded directly to nitrogen, which nitrogen is bonded directly to a ring
- 855Chalcogen, having no direct bond to a ring, attached directly by a single bond to acyclic carbon
- 856Nitrogen, other than as nitro or nitroso, attached indirectly to the azo group by nonionic bonding
- 857Hydroxy bonded directly to acyclic carbon or carbon chain (H of hydroxy may be replaced by the ammonium ion or Group IA or IIA light metal)
- 858Plural chalcogens bonded directly to the acyclic carbon or carbon chain
- 859Chalcogen bonded directly to a ring
- 860 ...Acyclic $-C(=X)-$ containing, wherein X is chalcogen (e.g., carbonyl, etc.)
- 861Hydroxy bonded directly to a bicyclo ring system (H of hydroxy may be replaced by a substituted or unsubstituted ammonium ion or a Group IA or IIA light metal)
- 862Nitrogen bonded directly to the $-C(=X)-$ group (e.g., carboxamide, etc.)
- 863The $-C(=X)-$ is bonded directly to the bicyclo ring system
- 864Sulfonyl containing
- 865Additional acyclic $-C(=X)-$ group
- 866Additional nitrogen bonded directly to the additional $-C(=X)-$ group
- 867At least three $-C(=X)H_2N$ groups, wherein substitution may be made for hydrogen only
- 868Additional amino nitrogen
- 869Plural oxygens bonded directly to the same monocyclic benzene ring
- 870Halogen, acyclic carbon, the azo group and an additional halogen or acyclic carbon, all bonded directly to the same benzene ring

- 871Acyclic carbon, carboxamide and chalcogen or an additional acyclic carbon, all bonded directly to the same benzene ring
- 872The nitrogen is additionally bonded directly to the bicyclo ring system
- 873Additional acyclic -C(=X)- group
- 874The -C(=X)- is bonded directly to the bicyclo ring system
- 875 ...Nitrogen, other than as nitro or nitroso, attached indirectly to the azo group by nonionic bonding
- 876Oxygen bonded directly to carbon
- 877The nitrogen and the oxygen are bonded directly to the same bicyclo ring system
- 878Sulfonyl bonded directly to the bicyclo ring system
- 879Plural sulfonyl groups or plural nitrogens bonded directly to the bicyclo ring system
- 880Additional sulfonyl which is attached indirectly to the bicyclo ring system by nonionic bonding
- 881Sulfonyl and the nitrogen bonded directly to the same bicyclo ring system
- 882 ...Oxygen double bonded directly to sulfur
- 883Sulfonyl bonded directly to a bicyclo ring system
- 884Plural sulfonyl groups bonded directly to the same bicyclo ring system
- 885 ..Benzene ring bonded directly to the azo group
- 886 ...Containing -C(=X)-, wherein X is chalcogen (e.g., carbonyl, etc.)
- 887 ..Purification or recovery

DIGESTS

- DIG 1 MIXTURES OF AZO COMPOUNDS
- DIG 2 AZO COMPOUNDS CONTAINING CHAINS OF EIGHT OR MORE CARBON ATOMS NOT PROVIDED FOR ELSEWHERE IN THIS CLASS
- DIG 3 POLYMERIC AZO COMPOUNDS OR AZO COMPOUNDS CONTAINING POLYMERIC MOIETIES
- DIG 4 AZO COMPOUNDS WHICH ARE LAKES
- DIG 5 AZO COMPOUNDS HAVING UTILITY OTHER THAN AS DYES
- DIG 6 AZO COMPOUNDS CONTAINING -N(O)-N=, -N=S, OR -SO₂N₃ GROUPS
- DIG 7 AUTOMATIC AND/OR CONTINUOUS TEMPERATURE CONTROL IN THE PREPARATION OF AZO COMPOUNDS
- DIG 8 ELIMINATION OF GROUPS DURING THE PREPARATION OF AZO COMPOUNDS
- DIG 9 AZO COMPOUNDS CONTAINING TERNARY SULFONIUM GROUPS
- DIG 10 AZO COMPOUNDS CONTAINING FORMALDEHYDE REACTION PRODUCT AS THE COUPLING COMPONENT

FOREIGN ART COLLECTIONS

FOR 000 CLASS-RELATED FOREIGN DOCUMENTS

