

























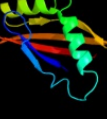






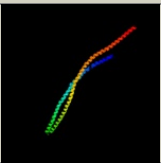
Phyre2

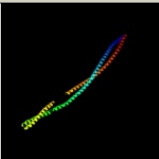
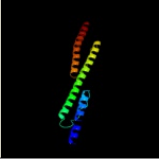
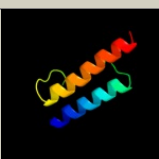
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Detailed template information

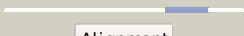
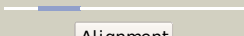
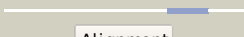
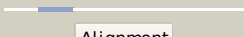

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	c2wkqA_	 Alignment		99.9	20	PDB header: transferase, cell adhesion Chain: A: PDB Molecule: nph1-1, ras-related c3 botulinum toxin substrate PDBTitle: structure of a photoactivatable rac1 containing the lov22 c450a mutant
2	d1p97a_	 Alignment		99.8	19	Fold: Profilin-like Superfamily: PYP-like sensor domain (PAS domain) Family: Hypoxia-inducible factor Hif2a, C-terminal domain
3	c3rtyA_	 Alignment		99.8	6	PDB header: circadian clock protein Chain: A: PDB Molecule: period circadian protein; PDBTitle: structure of an enclosed dimer formed by the drosophila period protein
4	d1jnua_	 Alignment		99.8	19	Fold: Profilin-like Superfamily: PYP-like sensor domain (PAS domain) Family: Flavin-binding PAS domain
5	c2z6dB_	 Alignment		99.8	20	PDB header: transferase Chain: B: PDB Molecule: phototropin-2; PDBTitle: crystal structure of lov1 domain of phototropin2 from2 arabidopsis thaliana
6	d1bywa_	 Alignment		99.7	18	Fold: Profilin-like Superfamily: PYP-like sensor domain (PAS domain) Family: Flavin-binding PAS domain
7	c3f1oB_	 Alignment		99.7	21	PDB header: transcription Chain: B: PDB Molecule: aryl hydrocarbon receptor nuclear translocator; PDBTitle: crystal structure of the high affinity heterodimer of hif22 alpha and arnt c-terminal pas domains, with an internally-3 bound artificial ligand
8	c2v1bA_	 Alignment		99.7	20	PDB header: transferase Chain: A: PDB Molecule: nph1-1; PDBTitle: n- and c-terminal helices of oat lov2 (404-546) are2 involved in light-induced signal transduction (room3 temperature (293k) light structure of lov2 (404-546))
9	c2kdkA_	 Alignment		99.7	15	PDB header: transcription regulator Chain: A: PDB Molecule: aryl hydrocarbon receptor nuclear translocator-like protein PDBTitle: structure of human circadian clock protein bmal2 c-terminal pas domain
10	d1n9la_	 Alignment		99.7	22	Fold: Profilin-like Superfamily: PYP-like sensor domain (PAS domain) Family: Flavin-binding PAS domain
11	c3ewkA_	 Alignment		99.7	30	PDB header: flavoprotein Chain: A: PDB Molecule: sensor protein; PDBTitle: structure of the redox sensor domain of methylococcus capsulatus2 (bath) mmos

12	c2vlgD_	Alignment		99.7	13 PDB header: transferase Chain: D: PDB Molecule: sporulation kinase a; PDBTitle: kina pas-a domain, homodimer
13	c3gdiB_	Alignment		99.7	17 PDB header: transcription Chain: B: PDB Molecule: period circadian protein homolog 2; PDBTitle: mammalian clock protein mper2 - crystal struture of a pas2 domain fragment
14	c2pr6A_	Alignment		99.7	22 PDB header: flavoprotein, signaling protein Chain: A: PDB Molecule: blue-light photoreceptor; PDBTitle: structural basis for light-dependent signaling in the dimeric lov2 photosensor ytvA (light structure)
15	c2l4rA_	Alignment		99.7	15 PDB header: transport protein Chain: A: PDB Molecule: potassium voltage-gated channel subfamily h member 2; PDBTitle: nmr solution structure of the n-terminal pas domain of herg
16	d1oj5a_	Alignment		99.7	12 Fold: Profilin-like Superfamily: PYP-like sensor domain (PAS domain) Family: PAS domain of steroid receptor coactivator 1A, NCo-A1
17	c3mjgB_	Alignment		99.7	15 PDB header: structural genomics, unknown function Chain: B: PDB Molecule: uncharacterized protein; PDBTitle: crystal structure of the pas domain of q24qt8_deshy protein from2 desulfitobacterium hafniense. northeast structural genomics3 consortium target dhr85c.
18	c3lyxA_	Alignment		99.6	22 PDB header: transcription Chain: A: PDB Molecule: sensory box/ggdef domain protein; PDBTitle: crystal structure of the pas domain of the protein cps_12912 from colwellia psychrerythraea. northeast structural3 genomics consortium target id csr222b
19	c2gj3A_	Alignment		99.6	24 PDB header: transferase Chain: A: PDB Molecule: nitrogen fixation regulatory protein; PDBTitle: crystal structure of the fad-containing pas domain of the2 protein nifl from azotobacter vinelandii.
20	c3h9wA_	Alignment		99.6	10 PDB header: structural genomics, unknown function Chain: A: PDB Molecule: diguanylate cyclase with pas/pac sensor; PDBTitle: crystal structure of the n-terminal domain of diguanylate cyclase with2 pas/pac sensor (maqu_2914) from marinobacter aquaeolei, northeast3 structural genomics consortium target mqr66c
21	c3oloB_	Alignment	not modelled	99.6	10 PDB header: transferase Chain: B: PDB Molecule: two-component sensor histidine kinase; PDBTitle: crystal structure of a pas domain from two-component sensor histidine2 kinase
22	c2pdtD_	Alignment	not modelled	99.6	19 PDB header: circadian clock protein Chain: D: PDB Molecule: vivid pas protein vvd; PDBTitle: 2.3 angstrom structure of phosphodiesterase treated vivid
23	c3mqoB_	Alignment	not modelled	99.6	11 PDB header: transcription regulator Chain: B: PDB Molecule: transcriptional regulator, luxr family; PDBTitle: the crystal structure of the pas domain in complex with isopropanol of2 a transcriptional regulator in the luxr family from burkholderia3 thailandensis to 1.7a
24	c3b33A_	Alignment	not modelled	99.6	12 PDB header: transferase Chain: A: PDB Molecule: sensor protein; PDBTitle: crystal structure of the pas domain of nitrogen regulation protein2 nr(ii) from vibrio parahaemolyticus
25	d1xj3a1	Alignment	not modelled	99.6	16 Fold: Profilin-like Superfamily: PYP-like sensor domain (PAS domain) Family: Heme-binding PAS domain
26	c1v9yA_	Alignment	not modelled	99.6	17 PDB header: signaling protein Chain: A: PDB Molecule: heme pas sensor protein; PDBTitle: crystal structure of the heme pas sensor domain of ec dos (ferric2 form)
27	d1v9ya_	Alignment	not modelled	99.6	17 Fold: Profilin-like Superfamily: PYP-like sensor domain (PAS domain) Family: Heme-binding PAS domain
28	c3caxA_	Alignment	not modelled	99.6	12 PDB header: structural genomics, unknown function Chain: A: PDB Molecule: uncharacterized protein pf0695; PDBTitle: crystal structure of uncharacterized protein pf0695

29	c3gecA	Alignment	not modelled	99.6	11	PDB header: circadian clock protein Chain: A: PDB Molecule: period circadian protein; PDBTitle: crystal structure of a tandem pas domain fragment of2 drosophila period
30	c1wa9A	Alignment	not modelled	99.6	9	PDB header: circadian rhythm Chain: A: PDB Molecule: period circadian protein; PDBTitle: crystal structure of the pas repeat region of the2 drosophila clock protein period
31	c3mfxA	Alignment	not modelled	99.6	10	PDB header: transcription Chain: A: PDB Molecule: sensory box/ggdef family protein; PDBTitle: crystal structure of the sensory box domain of the sensory-2 box/ggdef protein so_1695 from shewanella oneidensis,3 northeast structural genomics consortium target sor288b
32	d1ew0a	Alignment	not modelled	99.5	17	Fold: Profilin-like Superfamily: PYP-like sensor domain (PAS domain) Family: Heme-binding PAS domain
33	d1y28a	Alignment	not modelled	99.5	14	Fold: Profilin-like Superfamily: PYP-like sensor domain (PAS domain) Family: Heme-binding PAS domain
34	c3fg8B	Alignment	not modelled	99.5	15	PDB header: structural genomics, unknown function Chain: B: PDB Molecule: uncharacterized protein rha05790; PDBTitle: crystal structure of pas domain of rha05790
35	c3luqC	Alignment	not modelled	99.5	14	PDB header: transferase Chain: C: PDB Molecule: sensor protein; PDBTitle: the crystal structure of a pas domain from a sensory box2 histidine kinase regulator from geobacter sulfurreducens to3 2.5a
36	c3p7nB	Alignment	not modelled	99.5	11	PDB header: dna binding protein Chain: B: PDB Molecule: sensor histidine kinase; PDBTitle: crystal structure of light activated transcription factor el222 from2 erythrobacter litoralis
37	c2r78D	Alignment	not modelled	99.5	17	PDB header: transferase Chain: D: PDB Molecule: sensor protein; PDBTitle: crystal structure of a domain of the sensory box sensor2 histidine kinase/response regulator from geobacter3 sulfurreducens
38	c3bwlA	Alignment	not modelled	99.5	14	PDB header: transferase Chain: A: PDB Molecule: sensor protein; PDBTitle: crystal structure of pas domain of htr-like protein from haloarcula2 marismortui
39	c3mr0B	Alignment	not modelled	99.5	14	PDB header: transcription regulator Chain: B: PDB Molecule: sensory box histidine kinase/response regulator; PDBTitle: crystal structure of sensory box histidine kinase/response regulator2 from burkholderia thailandensis e264
40	c3fc7B	Alignment	not modelled	99.5	12	PDB header: transferase Chain: B: PDB Molecule: htr-like protein; PDBTitle: the crystal structure of a domain of htr-like protein from haloarcula2 marismortui atcc 43049
41	d1ll8a	Alignment	not modelled	99.4	18	Fold: Profilin-like Superfamily: PYP-like sensor domain (PAS domain) Family: N-terminal PAS domain of Pas kinase
42	c3a0vA	Alignment	not modelled	99.4	13	PDB header: transferase Chain: A: PDB Molecule: sensor protein; PDBTitle: pas domain of histidine kinase thka (tm1359) (semet,2 f486m/f489m)
43	c3eehA	Alignment	not modelled	99.4	14	PDB header: transferase Chain: A: PDB Molecule: putative light and redox sensing histidine kinase; PDBTitle: the crystal structure of the domain of the putative light and redox2 sensing histidine kinase from haloarcula marismortui
44	c1qu7A	Alignment		99.4	51	PDB header: signaling protein Chain: A: PDB Molecule: methyl-accepting chemotaxis protein i; PDBTitle: four helical-bundle structure of the cytoplasmic domain of a serine2 chemotaxis receptor
45	c3njaC	Alignment	not modelled	99.4	10	PDB header: structural genomics, unknown function Chain: C: PDB Molecule: probable ggdef family protein; PDBTitle: the crystal structure of the pas domain of a ggdef family protein from2 chromobacterium violaceum atcc 12472.
46	d1nwza	Alignment	not modelled	99.3	9	Fold: Profilin-like Superfamily: PYP-like sensor domain (PAS domain) Family: PYP-like
47	d1otda	Alignment	not modelled	99.3	10	Fold: Profilin-like Superfamily: PYP-like sensor domain (PAS domain) Family: PYP-like
48	c3mxqC	Alignment	not modelled	99.3	12	PDB header: transferase Chain: C: PDB Molecule: sensor protein; PDBTitle: crystal structure of sensory box sensor histidine kinase from vibrio2 cholerae
49	d1mzua	Alignment	not modelled	99.3	11	Fold: Profilin-like Superfamily: PYP-like sensor domain (PAS domain) Family: PYP-like
50	c3icyB	Alignment	not modelled	99.3	11	PDB header: structural genomics, unknown function Chain: B: PDB Molecule: sensor protein; PDBTitle: the crystal structure of sensory box histidine2 kinase/response regulator domain from chlorobium tepidum3 t/s
51	d1xfna1	Alignment	not modelled	99.2	9	Fold: Profilin-like Superfamily: PYP-like sensor domain (PAS domain) Family: PYP-like
52	c2oolA	Alignment	not modelled	99.2	8	PDB header: signaling protein Chain: A: PDB Molecule: sensor protein; PDBTitle: crystal structure of the chromophore-binding domain of an unusual2 bacteriophytochrome rpbphp3 from r. palustris PDB header: signaling protein

53	c3k3dA	Alignment	not modelled	99.2	18	Chain: A: PDB Molecule: protein rv1364c/mt1410; PDBTitle: the n-terminal pas domain crystal structure of rv1364c from2 mycobacterium tuberculosis at 2.3 angstrom
54	c2o9bA	Alignment	not modelled	99.2	12	PDB header: transferase Chain: A: PDB Molecule: bacteriophytochrome; PDBTitle: crystal structure of bacteriophytochrome chromophore binding domain
55	c3a0rA	Alignment	not modelled	99.2	11	PDB header: transferase Chain: A: PDB Molecule: sensor protein; PDBTitle: crystal structure of histidine kinase thka (tm1359) in complex with2 response regulator protein trra (tm1360)
56	c2qkpD	Alignment	not modelled	99.1	11	PDB header: structural genomics, unknown function Chain: D: PDB Molecule: uncharacterized protein; PDBTitle: crystal structure of c-terminal domain of smu_1151c from streptococcus2 mutans
57	c2jheB	Alignment	not modelled	99.0	13	PDB header: transcription Chain: B: PDB Molecule: transcription regulator tyrr; PDBTitle: n-terminal domain of tyrr transcription factor (residues 1 -2 190)
58	c3kx0X	Alignment	not modelled	99.0	19	PDB header: signaling protein Chain: X: PDB Molecule: uncharacterized protein rv1364c/mt1410; PDBTitle: crystal structure of the pas domain of rv1364c
59	c2w0nA	Alignment	not modelled	98.9	19	PDB header: transferase Chain: A: PDB Molecule: sensor protein dcus; PDBTitle: plasticity of pas domain and potential role for signal2 transduction in the histidine-kinase dcus
60	c2veaA	Alignment	not modelled	98.9	8	PDB header: transferase Chain: A: PDB Molecule: phytochrome-like protein cph1; PDBTitle: the complete sensory module of the cyanobacterial2 phytochrome cph1 in the pr-state.
61	c2ch7A	Alignment		98.9	22	PDB header: chemotaxis Chain: A: PDB Molecule: methyl-accepting chemotaxis protein; PDBTitle: crystal structure of the cytoplasmic domain of a bacterial2 chemoreceptor from thermotoga maritima
62	c3cloC	Alignment	not modelled	98.7	10	PDB header: transcription regulator Chain: C: PDB Molecule: transcriptional regulator; PDBTitle: crystal structure of putative transcriptional regulator containing a2 luxr dna binding domain (np_811094.1) from bacteroides3 thetaiotaomicron vpi-5482 at 2.04 a resolution
63	c3g67A	Alignment	not modelled	98.3	20	PDB header: signaling protein Chain: A: PDB Molecule: methyl-accepting chemotaxis protein; PDBTitle: crystal structure of a soluble chemoreceptor from thermotoga2 maritima
64	c3c2wB	Alignment	not modelled	97.8	14	PDB header: signaling protein Chain: B: PDB Molecule: bacteriophytochrome; PDBTitle: crystal structure of the photosensory core domain of p.2 aeruginosa bacteriophytochrome pabphp in the pfr state
65	c3lnrA	Alignment		97.4	8	PDB header: signaling protein Chain: A: PDB Molecule: aerotaxis transducer aer2; PDBTitle: crystal structure of poly-hamp domains from the p. aeruginosa soluble2 receptor aer2
66	d2ool a2	Alignment	not modelled	97.2	7	Fold: Profilin-like Superfamily: PYP-like sensor domain (PAS domain) Family: BphP N-terminal domain-like
67	d2o9ca2	Alignment	not modelled	96.6	13	Fold: Profilin-like Superfamily: PYP-like sensor domain (PAS domain) Family: BphP N-terminal domain-like
68	d3c2wa3	Alignment	not modelled	95.9	16	Fold: Profilin-like Superfamily: PYP-like sensor domain (PAS domain) Family: BphP N-terminal domain-like
69	d2veaa3	Alignment	not modelled	95.6	12	Fold: Profilin-like Superfamily: PYP-like sensor domain (PAS domain) Family: BphP N-terminal domain-like
70	d2asxa1	Alignment		95.2	29	Fold: HAMP domain-like Superfamily: HAMP domain-like Family: HAMP domain
71	c2rm8A	Alignment	not modelled	93.8	19	PDB header: signaling protein Chain: A: PDB Molecule: sensory rhodopsin ii transducer; PDBTitle: the solution structure of phototactic transducer protein2 htrii linker region from natronomonas pharaonis
72	c3zrwB	Alignment	not modelled	92.2	19	PDB header: signaling protein Chain: B: PDB Molecule: af1503 protein, osmolarity sensor protein envz; PDBTitle: the structure of the dimeric hamp-dhp fusion a291v mutant
73	c2wpqA	Alignment	not modelled	89.2	6	PDB header: membrane protein Chain: A: PDB Molecule: trimeric autotransporter adhesin fragment; PDBTitle: salmonella enterica sada 479-519 fused to gcn4 adaptors (2 sadak3, in-register fusion)
74	d1p0za	Alignment	not modelled	88.9	19	Fold: Profilin-like Superfamily: Sensory domain-like Family: Sensory domain of two-component sensor kinase
75	c1ei3E	Alignment	not modelled	88.7	9	PDB header: PDB COMPND:

76	c3ghgK	Alignment	not modelled	78.7	14	PDB header: blood clotting Chain: K: PDB Molecule: fibrinogen beta chain; PDBTitle: crystal structure of human fibrinogen
77	c1deqO	Alignment	not modelled	78.1	15	PDB header: PDB COMPND:
78	c3fosA	Alignment	not modelled	77.7	11	PDB header: transferase Chain: A: PDB Molecule: sensor protein; PDBTitle: crystal structure of two-component sensor histidine kinase domain from2 bacillus subtilis subsp. subtilis str. 168
79	c1sfcJ	Alignment	not modelled	75.1	3	PDB header: transport protein Chain: J: PDB Molecule: protein (syntaxin 1a); PDBTitle: neuronal synaptic fusion complex
80	c1ei3C	Alignment	not modelled	74.7	7	PDB header: PDB COMPND:
81	c3b5nF	Alignment	not modelled	74.1	13	PDB header: membrane protein Chain: F: PDB Molecule: protein sso1; PDBTitle: structure of the yeast plasma membrane snare complex
82	c3ojaB	Alignment	not modelled	73.6	10	PDB header: protein binding Chain: B: PDB Molecule: anopheles plasmodium-responsive leucine-rich repeat protein PDBTitle: crystal structure of lrim1/apl1c complex
83	c2qhKA	Alignment	not modelled	70.0	15	PDB header: signaling protein Chain: A: PDB Molecule: methyl-accepting chemotaxis protein; PDBTitle: crystal structure of methyl-accepting chemotaxis protein from vibrio2 parahaemolyticus rimd 2210633
84	c1m1jA	Alignment	not modelled	64.2	10	PDB header: blood clotting Chain: A: PDB Molecule: fibrinogen alpha subunit; PDBTitle: crystal structure of native chicken fibrinogen with two different2 bound ligands
85	dljoya	Alignment	not modelled	63.8	15	Fold: ROP-like Superfamily: Homodimeric domain of signal transducing histidine kinase Family: Homodimeric domain of signal transducing histidine kinase
86	c3ipdB	Alignment	not modelled	63.7	3	PDB header: exocytosis Chain: B: PDB Molecule: syntaxin-1a; PDBTitle: helical extension of the neuronal snare complex into the2 membrane, spacegroup i 21 21 21
87	c2npsB	Alignment	not modelled	62.4	14	PDB header: transport protein Chain: B: PDB Molecule: syntaxin 13; PDBTitle: crystal structure of the early endosomal snare complex
88	d3by8a1	Alignment	not modelled	61.9	23	Fold: Profilin-like Superfamily: Sensory domain-like Family: Sensory domain of two-component sensor kinase
89	c1deqF	Alignment	not modelled	58.0	7	PDB header: PDB COMPND:
90	c1n7sB	Alignment	not modelled	57.5	3	PDB header: transport protein Chain: B: PDB Molecule: syntaxin 1a; PDBTitle: high resolution structure of a truncated neuronal snare2 complex
91	c3ka5A	Alignment	not modelled	56.5	24	PDB header: chaperone Chain: A: PDB Molecule: ribosome-associated protein y (psrp-1); PDBTitle: crystal structure of ribosome-associated protein y (psrp-1)2 from clostridium acetobutylicum. northeast structural3 genomics consortium target id car123a
92	d2p7ja2	Alignment	not modelled	48.5	10	Fold: Profilin-like Superfamily: Sensory domain-like Family: Ykul C-terminal domain-like
93	c1kmiZ	Alignment	not modelled	48.2	13	PDB header: signaling protein Chain: Z: PDB Molecule: chemotaxis protein chez; PDBTitle: crystal structure of an e.coli chemotaxis protein, chez
94	d2c2aa1	Alignment	not modelled	46.9	14	Fold: ROP-like Superfamily: Homodimeric domain of signal transducing histidine kinase Family: Homodimeric domain of signal transducing histidine kinase
95	c2qltA	Alignment	not modelled	43.1	15	PDB header: hydrolase Chain: A: PDB Molecule: (dl)-glycerol-3-phosphatase 1; PDBTitle: crystal structure of an isoform of dl-glycerol-3-phosphatase, rhr2p,2 from saccharomyces cerevisiae
96	c3k2tA	Alignment	not modelled	42.0	15	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: lmo2511 protein; PDBTitle: crystal structure of lmo2511 protein from listeria2 monocytogenes, northeast structural genomics consortium3 target lkr84a
97	c3lifA	Alignment	not modelled	40.5	17	PDB header: signaling protein Chain: A: PDB Molecule: putative diguanylate cyclase (ggdef) with pas/pac domain; PDBTitle: crystal structure of the extracellular domain of the putative2 histidine kinase rphk1s-z16
98	c3c25A	Alignment	not modelled	34.2	17	PDB header: hydrolase/dna Chain: A: PDB Molecule: noti restriction endonuclease; PDBTitle: crystal structure of noti restriction endonuclease bound to cognate2 dna
99	c2d4yA	Alignment	not modelled	31.9	8	PDB header: structural protein Chain: A: PDB Molecule: flagellar hook-associated protein 1; PDBTitle: crystal structure of a 49k fragment of hap1 (flgk)
100	c1s94A	Alignment	not modelled	30.0	6	PDB header: endocytosis/exocytosis Chain: A: PDB Molecule: s-syntaxin; PDBTitle: crystal structure of the habc domain of neuronal syntaxin from the2 squid loligo pealei
101	d1s94a	Alignment	not modelled	30.0	6	Fold: STAT-like Superfamily: t-snare proteins Family: t-snare proteins

102	c2d3eD_	 Alignment	not modelled	25.5	8	PDB header: contractile protein Chain: D: PDB Molecule: general control protein gcn4 and tropomyosin 1 PDBTitle: crystal structure of the c-terminal fragment of rabbit2 skeletal alpha-tropomyosin
103	c2p7jA_	 Alignment	not modelled	25.0	10	PDB header: transcription Chain: A: PDB Molecule: putative sensory box/ggdef family protein; PDBTitle: crystal structure of the domain of putative sensory box/ggdef family2 protein from vibrio parahaemolyticus
104	c3u59C_	 Alignment	not modelled	21.8	14	PDB header: contractile protein Chain: C: PDB Molecule: tropomyosin beta chain; PDBTitle: n-terminal 98-aa fragment of smooth muscle tropomyosin beta
105	c2pkeA_	 Alignment	not modelled	21.7	13	PDB header: hydrolase Chain: A: PDB Molecule: haloacid delahogenase-like family hydrolase; PDBTitle: crystal structure of haloacid delahogenase-like family hydrolase2 (np_639141.1) from xanthomonas campestris at 1.81 a resolution
106	c2xhaB_	 Alignment	not modelled	21.4	22	PDB header: transcription Chain: B: PDB Molecule: transcription antitermination protein nusg; PDBTitle: crystal structure of domain 2 of thermotoga maritima n-utilization2 substance g (nusg)