

Table. Quality evaluation of the results of Lee method on the *HSim-data*.

IMG	MSE	PSNR	MSE3	PSNR3	SSIM	MSSIM	VSNR	VIFP	UQI	NQM	WSNR
IMD153	132.250	26.917	176.222	25.670	0.978	0.919	11.447	0.752	0.906	5.512	24.648
IMD154	154.452	26.243	208.743	24.935	0.977	0.897	11.798	0.710	0.865	8.778	22.585
ISIC_0000000	27.315	33.767	40.498	32.057	0.977	0.962	23.145	0.778	0.911	16.507	30.694
ISIC_0000008	54.246	30.787	75.397	29.357	0.979	0.957	18.832	0.764	0.916	10.502	27.841
ISIC_0000013	38.989	32.221	53.504	30.847	0.971	0.960	23.179	0.706	0.902	16.007	30.521
ISIC_0000016	25.042	34.144	37.425	32.399	0.990	0.964	22.080	0.697	0.895	17.949	33.504
ISIC_0000026	303.023	23.316	412.739	21.974	0.957	0.931	9.049	0.718	0.916	-0.220	20.084
ISIC_0000028	294.851	23.435	399.691	22.114	0.954	0.940	13.008	0.798	0.913	7.620	21.688
ISIC_0000038	300.510	23.352	404.827	22.058	0.967	0.946	14.233	0.770	0.912	8.516	21.603
ISIC_0000040	284.167	23.595	378.463	22.351	0.976	0.952	8.877	0.712	0.916	0.702	19.995
ISIC_0000047	285.920	23.568	387.216	22.251	0.959	0.939	11.634	0.693	0.903	7.476	21.920
ISIC_0000049	292.765	23.466	397.654	22.136	0.962	0.940	12.619	0.821	0.923	7.329	21.367
ISIC_0000051	278.541	23.682	378.786	22.347	0.969	0.952	11.261	0.853	0.937	5.540	21.670
ISIC_0000087	33.877	32.832	46.705	31.437	0.995	0.974	19.804	0.859	0.945	8.811	29.020
ISIC_0000089	17.798	35.627	24.520	34.236	0.996	0.981	19.327	0.871	0.955	17.088	32.546
ISIC_0000096	8.604	38.784	13.237	36.913	0.997	0.983	16.692	0.905	0.956	14.830	36.493
ISIC_0000105	5.545	40.692	7.555	39.349	0.997	0.988	20.763	0.929	0.968	21.394	38.671
ISIC_0000109	11.483	37.530	17.724	35.645	0.997	0.978	19.867	0.879	0.949	16.752	35.109
ISIC_0000120	9.922	38.165	14.061	36.651	0.993	0.984	25.557	0.908	0.960	17.347	35.665
ISIC_0000124	7.508	39.375	11.635	37.473	0.996	0.984	23.627	0.916	0.961	21.903	37.583
ISIC_0000141	5.372	40.829	7.622	39.310	0.995	0.988	22.304	0.888	0.960	21.506	38.294
ISIC_0000142	13.666	36.774	19.877	35.147	0.991	0.981	24.874	0.885	0.956	20.224	34.509
ISIC_0000143	5.094	41.061	7.069	39.637	0.997	0.990	24.123	0.925	0.969	20.287	39.446
ISIC_0000165	72.380	29.535	104.551	27.938	0.989	0.949	16.689	0.787	0.902	13.265	27.225
ISIC_0000172	71.160	29.608	102.395	28.028	0.989	0.940	17.768	0.786	0.912	12.203	26.074
ISIC_0000175	146.242	26.480	199.416	25.133	0.966	0.936	21.472	0.732	0.889	7.433	25.172
ISIC_0000184	26.720	33.862	39.355	32.181	0.995	0.959	20.266	0.815	0.915	16.444	31.995
ISIC_0000189	47.706	31.345	68.392	29.781	0.993	0.970	19.245	0.849	0.940	11.515	28.101
ISIC_0000205	32.579	33.001	58.491	30.460	0.989	0.937	22.400	0.719	0.881	17.389	31.173

ISIC_0000211	36.697	32.485	52.553	30.925	0.992	0.956	18.516	0.791	0.912	14.750	31.124
ISIC_0000213	425.434	21.842	591.665	20.410	0.955	0.903	15.302	0.653	0.854	2.293	19.046
ISIC_0000226	36.512	32.506	53.815	30.822	0.993	0.958	19.355	0.812	0.915	12.114	29.212
ISIC_0000230	52.592	30.922	77.618	29.231	0.988	0.951	18.836	0.775	0.894	10.823	28.082
ISIC_0000233	59.105	30.415	95.907	28.312	0.991	0.935	17.950	0.749	0.890	12.722	25.950
ISIC_0000236	19.918	35.138	28.701	33.552	0.985	0.965	24.184	0.758	0.912	16.669	33.569
ISIC_0000246	24.161	34.300	34.685	32.729	0.977	0.954	12.221	0.666	0.883	8.636	31.191
ISIC_0000257	14.885	36.403	20.021	35.116	0.993	0.974	14.336	0.750	0.922	10.323	32.190
ISIC_0000261	59.827	30.362	81.271	29.031	0.972	0.948	9.511	0.700	0.906	6.584	25.897
ISIC_0000344	147.313	26.448	198.691	25.149	0.980	0.920	13.102	0.748	0.882	5.766	24.896
ISIC_0000384	5.346	40.851	7.376	39.452	0.990	0.989	19.109	0.789	0.956	20.488	37.318
ISIC_0000385	3.448	42.756	4.912	41.218	0.996	0.992	25.219	0.890	0.969	25.751	42.663
ISIC_0000410	11.893	37.378	16.306	36.007	0.989	0.986	14.863	0.831	0.957	12.455	33.225
ISIC_0000412	8.051	39.072	11.231	37.627	0.994	0.987	20.358	0.880	0.960	18.570	36.618
ISIC_0000416	3.024	43.325	4.291	41.805	0.994	0.991	23.722	0.897	0.966	26.800	41.967
ISIC_0000421	5.774	40.516	7.660	39.289	0.997	0.990	20.294	0.910	0.968	21.266	36.615
ISIC_0000423	2.396	44.336	3.532	42.651	0.998	0.993	30.514	0.908	0.967	27.120	43.015
ISIC_0000426	3.333	42.902	4.893	41.235	0.997	0.992	33.096	0.914	0.968	29.581	41.965
ISIC_0000453	2.672	43.863	3.670	42.484	0.998	0.993	22.084	0.894	0.968	21.593	40.091
ISIC_0000454	7.643	39.298	10.113	38.082	0.996	0.989	17.565	0.875	0.965	13.974	34.353
ISIC_0000455	6.144	40.246	8.205	38.990	0.996	0.990	20.788	0.850	0.966	18.296	36.615
ISIC_0000457	20.382	35.038	27.514	33.735	0.992	0.967	17.338	0.812	0.921	10.622	31.571
ISIC_0000461	24.272	34.280	34.714	32.726	0.987	0.959	12.433	0.732	0.913	7.905	29.758
ISIC_0000466	123.664	27.208	165.514	25.942	0.974	0.933	12.189	0.691	0.889	5.387	22.904
ISIC_0000474	39.394	32.177	53.996	30.807	0.985	0.952	14.109	0.720	0.892	7.782	27.367
ISIC_0000478	14.320	36.571	20.189	35.080	0.992	0.971	16.823	0.788	0.915	10.053	33.469
ISIC_0000482	25.111	34.132	34.585	32.742	0.978	0.967	18.840	0.782	0.921	13.420	30.262
ISIC_0000503	14.655	36.471	21.322	34.843	0.987	0.970	18.175	0.771	0.923	15.295	33.283
ISIC_0000515	22.262	34.655	31.625	33.131	0.987	0.968	15.998	0.793	0.926	10.243	30.524
ISIC_0000530	46.924	31.417	64.317	30.048	0.985	0.943	11.807	0.676	0.885	7.737	28.346
ISIC_0000537	15.033	36.360	21.718	34.763	0.995	0.965	16.066	0.815	0.910	11.068	33.838
ISIC_0000539	187.786	25.394	255.495	24.057	0.981	0.930	16.344	0.725	0.890	3.113	22.323

ISIC_0000541	42.370	31.860	63.014	30.136	0.989	0.948	13.678	0.707	0.876	8.460	27.072
ISIC_0000556	50.328	31.113	71.163	29.608	0.988	0.949	16.576	0.751	0.901	8.233	27.984
ISIC_0001185	2.794	43.669	3.931	42.185	0.997	0.994	24.798	0.882	0.971	26.238	41.680
ISIC_0001367	8.363	38.907	11.330	37.589	0.996	0.986	17.861	0.855	0.957	18.458	36.108
ISIC_0001372	54.231	30.788	98.656	28.190	0.988	0.915	10.215	0.416	0.819	10.304	27.381
ISIC_0006982	4.379	41.717	6.318	40.125	0.997	0.991	17.597	0.896	0.968	17.799	39.600
ISIC_0007038	4.157	41.943	6.064	40.304	0.996	0.991	16.981	0.884	0.974	20.602	38.450
ISIC_0007087	15.897	36.118	28.945	33.515	0.996	0.971	14.683	0.714	0.924	14.870	32.486
ISIC_0007693	11.965	37.352	16.412	35.979	0.988	0.986	11.822	0.786	0.959	10.848	33.922
ISIC_0009875	70.303	29.661	95.455	28.333	0.985	0.958	14.391	0.812	0.931	7.503	25.971
ISIC_0009877	202.766	25.061	273.926	23.754	0.973	0.932	20.631	0.781	0.914	2.052	23.410
ISIC_0009881	27.801	33.690	37.560	32.384	0.977	0.960	15.636	0.684	0.905	13.732	31.687
ISIC_0009882	62.740	30.155	85.993	28.786	0.975	0.952	12.636	0.655	0.900	9.618	26.115
ISIC_0009883	49.352	31.198	65.507	29.968	0.971	0.948	15.155	0.730	0.908	11.432	29.118
ISIC_0009885	87.830	28.694	118.280	27.402	0.976	0.951	12.682	0.740	0.926	7.555	25.376
ISIC_0009891	109.084	27.753	143.463	26.563	0.977	0.943	8.389	0.672	0.909	3.690	22.689
ISIC_0009895	32.961	32.951	47.839	31.333	0.985	0.964	17.773	0.829	0.924	12.230	30.967
ISIC_0009897	46.316	31.474	63.430	30.108	0.990	0.953	18.084	0.764	0.902	10.599	27.467
ISIC_0009926	28.423	33.594	37.287	32.415	0.977	0.956	17.287	0.685	0.896	11.703	33.429
ISIC_0009928	88.721	28.651	120.415	27.324	0.985	0.948	19.272	0.781	0.910	9.907	26.444
ISIC_0009940	29.770	33.393	42.450	31.852	0.991	0.962	16.954	0.792	0.914	11.400	29.810
ISIC_0009962	72.299	29.539	97.085	28.259	0.981	0.949	19.899	0.780	0.909	11.086	27.184
ISIC_0009965	12.691	37.096	17.575	35.682	0.992	0.972	16.504	0.794	0.914	12.341	35.250
ISIC_0009970	29.825	33.385	40.213	32.087	0.991	0.960	20.470	0.801	0.911	8.110	32.587
ISIC_0009973	40.579	32.048	55.053	30.723	0.986	0.959	20.920	0.796	0.915	11.601	30.292
ISIC_0009986	34.894	32.703	48.140	31.306	0.968	0.953	17.330	0.770	0.906	15.222	32.280
ISIC_0009987	49.520	31.183	65.239	29.986	0.984	0.962	19.111	0.833	0.934	11.653	29.026
ISIC_0009993	33.238	32.914	44.902	31.608	0.989	0.969	21.622	0.765	0.909	10.981	31.791
ISIC_0010000	19.341	35.266	26.362	33.921	0.990	0.972	14.474	0.839	0.938	12.283	31.416
ISIC_0010019	25.664	34.038	34.806	32.714	0.986	0.959	17.621	0.770	0.913	10.783	31.299
ISIC_0010022	18.346	35.495	24.126	34.306	0.986	0.966	19.866	0.769	0.916	16.256	34.211
ISIC_0010028	60.216	30.334	80.941	29.049	0.972	0.941	12.738	0.701	0.903	6.646	27.567

ISIC_0010033	74.323	29.420	96.514	28.285	0.976	0.946	15.101	0.716	0.902	9.676	26.990
ISIC_0010034	35.372	32.644	47.254	31.386	0.981	0.955	14.100	0.734	0.903	8.553	28.141
ISIC_0010035	31.500	33.148	41.658	31.934	0.983	0.960	8.496	0.833	0.926	5.720	28.577
ISIC_0010046	38.619	32.263	50.698	31.081	0.992	0.952	8.217	0.791	0.914	6.614	28.211
ISIC_0010057	10.339	37.986	14.063	36.650	0.991	0.979	15.718	0.829	0.941	11.343	35.562
ISIC_0010063	56.970	30.574	80.635	29.066	0.992	0.947	18.126	0.797	0.912	11.205	27.914
ISIC_0010069	22.709	34.569	29.879	33.377	0.981	0.968	15.708	0.778	0.923	11.632	32.595
ISIC_0010070	63.449	30.107	87.298	28.721	0.980	0.948	20.749	0.713	0.905	12.458	29.053
ISIC_0010074	38.840	32.238	51.813	30.986	0.984	0.956	12.241	0.790	0.917	7.609	29.352
ISIC_0010079	17.523	35.695	23.306	34.456	0.993	0.975	21.152	0.795	0.936	9.289	35.082
ISIC_0010080	67.934	29.810	89.079	28.633	0.986	0.962	14.947	0.847	0.938	9.686	25.674
ISIC_0010083	23.034	34.507	30.711	33.258	0.986	0.969	19.096	0.819	0.931	14.838	32.127
ISIC_0010088	31.575	33.137	42.825	31.814	0.987	0.970	18.331	0.825	0.936	10.157	31.960
ISIC_0010093	32.814	32.970	43.976	31.699	0.983	0.951	13.012	0.759	0.909	8.533	30.724
ISIC_0010094	94.875	28.359	124.901	27.165	0.964	0.940	17.236	0.720	0.903	8.938	25.719
ISIC_0010100	80.271	29.085	108.264	27.786	0.987	0.961	22.219	0.805	0.926	2.917	27.702
ISIC_0010168	47.266	31.385	63.317	30.116	0.973	0.948	17.600	0.731	0.901	11.475	29.442
ISIC_0010169	36.484	32.510	48.627	31.262	0.986	0.949	18.566	0.760	0.902	9.201	29.830
ISIC_0010182	41.090	31.993	55.472	30.690	0.963	0.947	14.732	0.596	0.885	7.949	29.978
ISIC_0010183	85.930	28.789	114.726	27.534	0.972	0.944	8.019	0.638	0.890	4.064	24.663
ISIC_0010185	23.787	34.367	31.654	33.126	0.975	0.961	9.077	0.745	0.911	8.736	30.476
ISIC_0010187	31.214	33.187	40.953	32.008	0.989	0.969	19.399	0.801	0.934	10.351	29.923
ISIC_0010191	47.980	31.320	64.105	30.062	0.989	0.957	15.856	0.794	0.907	8.104	27.906
ISIC_0010215	20.193	35.079	26.437	33.909	0.983	0.972	13.984	0.783	0.931	9.410	31.389
ISIC_0010223	89.642	28.606	121.454	27.287	0.985	0.935	17.073	0.752	0.896	9.488	26.585
ISIC_0010226	52.791	30.905	68.491	29.774	0.983	0.945	12.075	0.719	0.908	4.659	29.058
ISIC_0010234	52.076	30.964	69.496	29.711	0.980	0.957	16.320	0.732	0.920	9.987	28.894
ISIC_0010249	98.978	28.175	131.461	26.943	0.983	0.940	12.767	0.704	0.897	6.326	25.434
ISIC_0010252	33.571	32.871	45.327	31.567	0.993	0.963	18.595	0.824	0.921	9.115	31.720
ISIC_0010256	24.304	34.274	32.409	33.024	0.976	0.967	9.563	0.661	0.913	10.523	30.193
ISIC_0010261	43.604	31.736	58.544	30.456	0.982	0.957	12.654	0.736	0.906	9.509	28.574
ISIC_0010262	32.978	32.949	44.117	31.685	0.979	0.962	17.129	0.778	0.915	12.017	30.959

ISIC_0010326	42.115	31.886	55.806	30.664	0.984	0.955	9.883	0.714	0.920	5.410	28.264
ISIC_0010331	67.802	29.818	91.374	28.523	0.987	0.949	18.628	0.797	0.905	6.945	28.580
ISIC_0010332	83.869	28.895	111.717	27.650	0.979	0.941	12.447	0.727	0.895	6.814	24.611
ISIC_0010333	43.986	31.698	58.094	30.489	0.980	0.962	17.674	0.774	0.927	11.194	29.278
ISIC_0010334	25.322	34.096	34.863	32.707	0.989	0.958	20.429	0.753	0.911	13.149	32.451
ISIC_0010342	64.647	30.025	86.540	28.759	0.984	0.947	20.991	0.764	0.917	8.158	28.669
ISIC_0010373	32.900	32.959	43.032	31.793	0.983	0.961	18.279	0.734	0.908	13.072	31.951
ISIC_0010442	54.311	30.782	75.918	29.327	0.973	0.945	15.798	0.735	0.898	7.935	28.016
ISIC_0010443	34.862	32.707	46.083	31.495	0.983	0.965	19.494	0.779	0.922	12.561	30.852
ISIC_0010447	47.622	31.353	65.807	29.948	0.971	0.942	13.731	0.740	0.895	11.060	26.724
ISIC_0010448	69.542	29.708	93.084	28.442	0.986	0.947	4.691	0.775	0.915	2.694	23.840
ISIC_0010454	29.260	33.468	39.526	32.162	0.993	0.973	21.523	0.861	0.940	9.742	32.225
ISIC_0010462	36.897	32.461	49.078	31.222	0.978	0.962	13.025	0.807	0.923	13.266	27.903
ISIC_0010468	42.525	31.844	55.833	30.662	0.982	0.956	11.264	0.770	0.911	8.741	28.435
ISIC_0010557	48.608	31.264	66.186	29.923	0.981	0.950	7.692	0.773	0.908	5.452	27.010
ISIC_0010582	36.428	32.516	48.627	31.262	0.981	0.962	15.771	0.828	0.921	13.198	30.294
ISIC_0010584	11.216	37.632	15.213	36.309	0.994	0.979	15.329	0.879	0.944	12.649	34.171
ISIC_0010589	23.932	34.341	30.881	33.234	0.988	0.971	16.893	0.824	0.930	13.354	31.149
ISIC_0010598	91.303	28.526	120.856	27.308	0.974	0.952	13.719	0.799	0.921	5.691	25.956
ISIC_0010599	43.525	31.743	58.437	30.464	0.977	0.949	12.330	0.666	0.892	6.621	28.138
ISIC_0010854	53.235	30.869	73.701	29.456	0.985	0.953	5.947	0.700	0.906	3.885	25.684
ISIC_0011083	36.692	32.485	48.739	31.252	0.983	0.961	13.134	0.700	0.908	11.872	30.029
ISIC_0011105	75.038	29.378	101.253	28.077	0.984	0.954	20.721	0.773	0.921	6.198	27.630
ISIC_0011119	47.809	31.336	62.722	30.157	0.976	0.953	16.952	0.712	0.903	10.483	29.881
ISIC_0011123	54.321	30.781	71.839	29.567	0.982	0.949	14.922	0.723	0.909	6.954	27.697
ISIC_0011137	34.866	32.707	47.966	31.321	0.986	0.955	16.023	0.740	0.897	8.900	29.087
ISIC_0011143	24.235	34.286	32.492	33.013	0.988	0.967	17.038	0.661	0.915	9.726	34.544
ISIC_0011157	130.741	26.967	173.086	25.748	0.966	0.933	19.412	0.695	0.903	4.397	25.566
ISIC_0011163	37.852	32.350	50.768	31.075	0.983	0.955	18.024	0.699	0.906	12.819	31.548
ISIC_0011168	61.648	30.232	81.448	29.022	0.978	0.948	10.574	0.740	0.909	7.507	26.676
ISIC_0011171	75.289	29.363	99.272	28.163	0.977	0.950	19.647	0.731	0.915	10.257	28.038
ISIC_0011172	112.993	27.600	151.248	26.334	0.975	0.950	10.867	0.798	0.924	4.874	23.180

ISIC_0011176	22.406	34.627	30.356	33.308	0.992	0.970	20.807	0.810	0.930	15.103	33.439
ISIC_0011177	41.691	31.930	55.854	30.660	0.984	0.953	21.091	0.784	0.911	6.583	31.954
ISIC_0011205	33.982	32.818	44.684	31.629	0.990	0.961	20.934	0.768	0.917	16.067	32.922
ISIC_0011211	34.669	32.731	46.444	31.462	0.986	0.967	19.299	0.767	0.921	10.131	29.254
ISIC_0011212	39.278	32.189	52.823	30.903	0.977	0.947	16.599	0.698	0.884	7.974	29.056
ISIC_0011230	179.341	25.594	239.370	24.340	0.963	0.925	14.536	0.628	0.881	4.118	23.515
ISIC_0011323	30.361	33.308	40.709	32.034	0.984	0.968	14.807	0.809	0.938	11.530	30.180
ISIC_0011332	26.539	33.892	38.053	32.327	0.992	0.965	20.374	0.827	0.919	14.288	32.045
ISIC_0011353	33.330	32.902	45.330	31.567	0.977	0.957	12.971	0.787	0.914	11.062	29.973
ISIC_0011367	63.643	30.093	84.674	28.853	0.975	0.947	12.431	0.662	0.891	2.328	28.287
ISIC_0011378	24.394	34.258	32.229	33.048	0.982	0.964	19.229	0.733	0.910	17.737	33.158
ISIC_0011382	28.861	33.528	38.538	32.272	0.978	0.963	19.534	0.760	0.916	13.382	30.235
ISIC_0011400	46.398	31.466	64.648	30.025	0.984	0.949	16.578	0.746	0.900	11.393	29.462